



### THE ROYAL GOLD MEDAL.

Presentation to Monsieur HENRI PAUL NÉNOT, Membre de l'Institut [*Hon. Corr. M.*]  
at the General Meeting, Monday, 25th June, 1917.\*

[The President at the opening of the proceedings expressed his regret that M. Nénot was unable to be present, and explained that he was suffering from a severe attack of bronchitis which prevented his leaving home. The French Ambassador, however, Mr. Newton said, had deputed M. Adrien Thierry, Secretary of the Embassy, to attend to receive the Medal on M. Nénot's behalf, and he would read presently a letter from M. Nénot and address a few words to the Meeting.]

#### ADDRESS BY MR. ERNEST NEWTON, A.R.A., *President.*

MY LORD, LADIES AND GENTLEMEN,—It is my privilege this afternoon as President of the Royal Institute of British Architects and thus representing the architects of the United Kingdom to present to M. Henri Paul Nénot the Royal Gold Medal for Architecture given by His Majesty the King.

It is customary on these occasions to give an outline of the career of the recipient of this Medal, and although most of us know M. Nénot's history there may be some to whom his interesting and strenuous career is not so familiar.

It is not often that a taste for the austere and difficult art of architecture manifests itself at a very early age, but we find M. Nénot, when only nine years old, already showing a marked predilection, not, as we might expect, for its external and more naturally attractive aspects, but by making a detailed and accurate plan of the "pension" at Villiers-le-Bel. Fortunately this tendency was encouraged by those responsible for his education, and he was placed at the age of thirteen in the atelier of M. Lequeux. Surely the youngest architect pupil on record! At fifteen he entered the Ecole des Beaux-Arts. His studies were abruptly interrupted in 1870 when, immediately on the outbreak of war, he enlisted, fought valiantly and received, as his first decoration, the Military Medal. After the war he served his

\* Among the large and distinguished company present were M. Adrien Thierry, Secretary of the French Embassy, the Earl of Plymouth [*Hon. A.*], Sir Lionel Earle, K.C.B., C.M.G., Sir Wm. Goscombe John, R.A. [*Hon. A.*], Sir Henry Tanner, C.B., I.S.O. [*F.*], Sir George Frampton, R.A. [*Hon. A.*], Sir Arthur S. Cope, R.A. [*Hon. A.*], Sir Charles Waldstein, Litt.D., Mr. George Clausen, R.A., and the following Royal Gold Medallists of previous years: Sir Thomas G. Jackson, Bart, R.A., Sir Aston Webb, K.C.V.O., C.B., R.A., *Past President*, Sir Ernest George, R.A., *Past President*, Mr. Thomas E. Collcutt, *Past President*, and Mr. Reginald Blomfield, R.A., *Past President*. The proceedings were graced by the presence of several ladies.

term in the artillery, and so great was his patriotism that it required all the persuasion of his former masters to prevent him from re-engaging in the Army and to bring him back into the paths of architecture and a resumption of his studies at the Ecole des Beaux-Arts. Here he continued to work until 1877 when, at the age of 24, he gained the Grand Prix de Rome. During these years M. Nénot worked in the atelier of M. de Questel and in the office of Charles Garnier, competed in collaboration with M. Oudiné for some important buildings in Belgium, won the competition and was entrusted with the execution of the work.

Many of us would think that after these strenuous years of study, crowned by the Grand Prix, M. Nénot might have considered himself fully equipped and entitled to settle down to the practice of architecture, but he wisely looked on all these years of work as preliminary, and, being persuaded that it was only by a profound study of the ancient masterpieces of architecture that a complete mastery of his art was to be gained, he visited in turn the principal towns of Italy and Greece as well as Constantinople and Jerusalem and finished his tour of study by a visit to Egypt. During his last year at the Villa Medici M. Nénot competed amongst 240 architects for the National Monument at Rome to King Victor Emmanuel, being impelled to compete by the laughing taunt of a very young architect that Italian architects were certainly superior to all foreigners! The prize of 50,000 francs was awarded to him, but the execution of the work was entrusted to an Italian.

M. Nénot then undertook a tour of study in France and a critical and careful examination of buildings designed for every purpose, and with all these years of careful preparation behind him and equipped with this well digested knowledge he entered for the great competition for the rebuilding of the Sorbonne, won it and, after some hesitation on account of his age, he being then only 29, the execution of the work was placed in his hands, but was not actually begun until after he had visited the Universities of Germany, Austria, Belgium and Holland.

I will not attempt to describe this great work which took seventeen years to complete; it is well known to all visitors to Paris and is the subject of a fine monograph by M. Nénot, a copy of which is in our Library.

M. Nénot has carried out numerous other works of importance, but it is with the Sorbonne that his name will always be especially associated.

I know it is expected that the President when he presents the Gold Medal shall efface himself so soon as he has delivered a brief introductory address and leave the stage to the medallist, whom everyone is anxious to acclaim, but I cannot at a time like this hand to a distinguished Frenchman this token of our respect and admiration without telling him, and through him his compatriots, something of what his great country is to us.

It is a tradition that English people do not understand the French, and we may be almost grateful to the war for having revealed France to many who did not know her well. To architects the history and masterpieces of French architecture are of absorbing interest. Its unique Gothic architecture—the picturesque transition from Gothic to the mature and ordered Renaissance—modern work, all in turn, claim our admiration and show us achievements not only of the highest intellectual attainment, but containing always that something more than talent, that touch of personal and national genius so particularly characteristic of French architecture. France can boast of a long succession of highly distinguished architects who have gained their reputation by a profound study and complete mastery of the principles and technique of their art.

All this splendid work can only have been done by a fine people. The very name, France, conjures up visions of a nation with as many facets as a diamond. Every period of its history is brilliant, but the France of to-day is perhaps the most impressive of all. Devoted to peace, although nursing a dignified determination to efface the memory of 1870, when the time came to put that determination into action there was at once manifest in every class and degree a quiet, serene determination to suffer everything, to endure everything and to conquer. Never in the whole history of the world have such battles been

fought as during this war. Never have more heroic deeds been performed, and yet, amidst all these gigantic happenings, the steadfast and unbreakable resistance at Verdun stands out in lurid relief and will be told so long as the world endures. It is impossible to believe that our two nations, having fought shoulder to shoulder throughout these long terrible years, can ever again break a bond cemented by the blood of our sons, but that, for all time, we shall be united by the tie of a friendship based on mutual understanding, affection and respect. This alliance should be proof against the insidious propaganda of that nation which has, to its eternal shame, brought to such perfection the truly devilish arts of lying, false witness and sowing discord.

I can only regret that it is not my pleasant duty to-day to decorate, as well as M. Nénot, a distinguished architect representative of the other Allies. We have already on our list of Royal Gold Medallists the names of famous Italian and American architects, and we may hope, when peace again allows us to pursue our art unhindered, to add to that list the names of architects of those other allied nations who are not yet inscribed on our Roll.

Monsieur Thierry, I now have the pleasure of handing to you on behalf of Monsieur Nénot the Royal Gold Medal. It has already been explained to Monsieur Nénot that, on account of the war, medals are not being struck in gold. This is therefore a token only, and after the war will be exchanged for the Gold Medal.

Please convey to Monsieur Nénot our deep regret that, on account of his health, I have not been able to hand the medal to him personally. I will ask you also to thank his Excellency, Monsieur Cambon, for accepting this medal, through your kind agency, on behalf of Monsieur Nénot.

It is a matter of great satisfaction to us that a famous French architect has been selected for this distinction to-day, as it affords us an opportunity not only of expressing our admiration for Monsieur Nénot as an architect and for the architecture of his country, but also our affection for France and the great French nation. It is one of our defects—or qualities—as a people that we are not demonstrative, and find it difficult to talk about that which we feel most keenly, but even the most reserved Englishman must feel impelled by the circumstances of the times to give some expression to the feelings which burn within him, if it is only to say, "Long live France! Long live our great Allies, and may speedy victory be ours and a real and lasting peace!"

M. Adrien Thierry having received the medal, read the following letter from M. Nénot :—

MONSIEUR LE PRÉSIDENT,—J'ai eu une crise très longue de bronchite aiguë et à peine remis j'ai dû accepter (la mission étant un peu dangereuse) d'aller dans le Pas de Calais visiter Arras, Bapaume, etc. J'ai été émerveillé par la splendide organisation et la belle tenue des troupes Anglaises, mais ce petit voyage m'a bien fatigué et ayant fait venir mon médecin, pour répondre à votre lettre, il m'a interdit durant un mois tout nouveau déplacement.

Je regrette bien vivement de ne pouvoir aller à Londres recevoir de vos mains cette belle médaille si glorieuse pour moi, et je vous remercie de nouveau, ainsi que les membres de l'Institut Royal Britannique, du très grand honneur que vous avez bien voulu me faire en m'attribuant cette médaille. J'aurais été heureux de vous remercier de vive voix et de vous dire toute l'admiration des Français pour votre grand pays.

Confiant dans l'issue glorieuse de la lutte que nous soutenons contre la barbarie, j'ai l'honneur, Monsieur le Président, de vous exprimer ma gratitude avec l'assurance de ma très haute considération.

H. P. NÉNOT.

M. THIERRY then addressed the meeting as follows :—

Monsieur le Président, Mesdames, Messieurs,—C'est un grand honneur pour moi de recevoir aujourd'hui la médaille que vous avez bien voulu conférer à M. Nénot. Il eût su mieux que moi, j'en suis sur, vous dire tout le prix qu'il attache à cette distinction. J'ajoute que personne mieux que mon illustre compatriote n'avait mérité cette récompense.

Je ne m'attendais pas à prendre la parole aujourd'hui devant vous ; je suis heureux toutefois de vous remercier, M. le Président, de vos paroles si flatteuses pour l'architecture française. Vous avez bien voulu aussi parler de vos sentiments pour la France ; permettez-moi de vous dire que nous professons les mêmes à l'égard de l'Angleterre. On vous a dit bien des fois combien on admire en France l'effort admirable de la Grande Bretagne pendant cette guerre. Ce sont là aujourd'hui presque des lieux communs et je ne sais qui pourrait douter de la solidité de l'alliance de nos deux grands pays.

Mais puisque je m'adresse aujourd'hui à des architectes, je tiens à dire un mot de plus. Vous savez l'affection de tous les Français pour leurs monuments historiques ; leurs vieilles pierres ont été parfois détruites ou souillées par un ennemi que rien n'arrête. Je suis sûr que vos cœurs ont battu à l'unisson des nôtres quand vous avez appris ces dévastations barbares et inutiles. Aussi croyez-le bien, vous allez droit au cœur des Français en vous associant à leur légitime indignation.

Messieurs et Mesdames, je vous remercie encore au nom de M. Nénot et de l'architecture française du grand honneur que vous leur conférez.

Mr. WALTER CAVE [F.] : My Lord, Ladies and Gentlemen,—I have been asked to propose a vote of thanks to His Excellency M. Cambon, the French Ambassador, for deputing M. Thierry to attend here this afternoon to receive this Medal. It is always unfortunate when the recipient of the Medal is unable to attend himself, but there are advantages, for it enables us, as to-day, to welcome one of his countrymen among us whom we should not otherwise see. I therefore have pleasure in proposing this vote of thanks to his Excellency, and I will ask M. Thierry to convey to him our sentiments. (Applause.)

The vote having been seconded by Mr. E. Guy Dawber, *Hon. Secretary*, was carried by acclamation, and briefly acknowledged.

#### PRESENTATION OF MR. NEWTON'S PORTRAIT

The function of unveiling and formally presenting to the Institute the portrait of the outgoing President, Mr. Ernest Newton, took place at the meeting of the 25th June, following the presentation of the Royal Gold Medal. The portrait, a speaking likeness, is the work of Mr. Arthur Hacker, R.A., and was hung at the Academy last year. The unveiling was performed by Mr. Reginald Blomfield, R.A., Mr. Newton's predecessor in the Chair. This was Mr. Newton's last official appearance in the position he had held since July, 1914. It is interesting to recall that his first public act as President in the early days of August, 1914, was to issue an invitation to the profession to meet together at Conduit Street and discuss ways and means of giving assistance to the country in the calamity that had suddenly fallen upon the world. Mr. Newton from the first laid stress on the need to be clear in their own minds as to their offer of help ; it must be definitely a patriotic offer of assistance to the country in its hour of need and at some personal sacrifice ; there ought to be no suspicion that it was help for themselves that was wanted.

Mr. Newton, who has been filling for some time an honorary but very responsible position at the Ministry of Munitions, has been recently appointed Director of the Building Section of the Labour Supply

Department of the Ministry. This section deals with building licences, building wages, alien labour in munition factories, and passports for skilled men travelling to other countries to do technical work. Mr. Newton is serving in this position also without salary. The feeling is general that his presence at the Ministry is a guarantee that, so far as the urgent requirements of the State permit, the interests of all connected with the building industry will be safeguarded.

MR. REGINALD BLOMFIELD, R.A., *Past President* and *Royal Gold Medallist*, in unveiling the portrait, said : There is one ceremony which is still wanting to complete the proceedings to-day, and that is the formal presentation of the portrait of our President. It is three years almost to the day since he succeeded me in the office which he now holds, in the chair which he has filled with such dignity and address. I need hardly say that he has discharged his office under circumstances of very great anxiety and very great difficulty. I daresay you may recollect that quite early in the war the President of the Institute offered the services of the Institute, and of the large and important profession which it represents, to the Government. The Minister responsible at that time in the late Government received the offer with a discourtesy—I cannot call it anything else—which I can only attribute to a pretty complete ignorance of

the whole situation. Of course we know it is the custom in this country to place at the head of Departments—very important and responsible Departments—gentlemen of undoubted virtue and character, and so on, whose chief qualification is that they really know nothing at all about the subjects with which they have to deal. In that way we get a perfectly unbiassed and unprejudiced opinion, and no obstacles are put in the way of the exercise of their original genius. I need not say anything further about that, except that the President was undaunted by this rebuff, and, being a patriotic man, at once placed his services at the disposal of the Ministry of Munitions, where he has laboured in a most devoted manner for three years, and where, I think I may venture to express the hope, his labours will have convinced the authorities that architects are not all imbeciles and men of straw. Well, the many fine qualities of our President have long been known to his old friends, and during his three years of office he has made many new friends, and I am sure I am justified in saying he has won the esteem and regard of everybody with whom he has come into contact by his tact, his sagacity and ready sympathy. Though he is leaving the Chair, we shall hope often to see him in our midst; and in his absence, owing to the courtesy and skill of our old friend Mr. Arthur Hacker, we shall have his *vera effigies* always before us—in other words, this excellent portrait, which I have the honour to unveil and formally present to the Institute. (Much applause.)

MR. PAUL WATERHOUSE, *Vice-President*: I am going to ask the meeting to bear with me for a few minutes, though it is the end of the meeting. It is customary on these great occasions for the time to be occupied by great men with oratory. You have had the great men and the oratory, and my only excuse for appearing before you to-day is that I learned there was an opportunity of speaking on a subject upon which I would not willingly lose the opportunity of speech. It is true that the subject set for me is the portrait of Mr. Newton. I shall not deal with the portrait, excellent as it is: I am going to deal with Mr. Newton himself. I have known the portrait for four or five minutes: I have known Mr. Newton for many years. I make no secret of the fact that I speak full of prejudice. Mr. Newton is a friend of mine; I am not going the length of saying I am a friend of his; in fact, I think my chance of being ranked among his intimate acquaintance will be ruined this afternoon by the breach I propose to make in that wall of modesty with which he surrounds himself. Had M. Nénot been here I should have attempted to use him as an excuse for breaking into stammering and bad French in order to express, under the veil of a foreign language—I beg you will excuse me, M. Thierry, the word “foreign” no longer exists between France and England—(M. Thierry: “Hear, hear”)—under the veil of a friendly language and in the obscurity of my inferior pronunciation, I should

have been able to say with greater freedom some of the things which it is less easy to say openly in English. But there is a rare pleasure sometimes in saying to a man's face the things which one has been accustomed to say behind his back. I have to forgo this opportunity of using the veil of a fraternal language, so I must turn into a sort of English the things I would have liked to make known. You know how much we respect our President: what an excellent President he has been: how he is not only a first-rate architect, but also a first-rate citizen, and how he has thrown himself into the problems of these troublous days. I do not know whether you know the story of the partridge of Paphlagonia: it is a story which was an old one when I was young. It relates of a young man making a speech in the Union at Oxford. Those were the happy days when quotations from Latin were considered the proper ornaments of public speech, and the young men of Oxford thought they must practise for themselves the graces which they would afterwards have to use in the House of Commons. And this young speaker put his Latin allusion at the beginning of his speech. His speech was one in opposition to a motion, and he turned to the President of the assembly, raising his hand in an oratorical gesture, and said: “Sir, it is reported in the *Noctes Atticæ* of Aulus Gellius, on the authority of Theopompus, that the partridges of Paphlagonia have two hearts. Now, Sir, whether or not it be true that the partridges of Paphlagonia have two hearts, at least we can be certain that if those partridges have two hearts they are more than twice as well off for hearts as the Honourable Member opposite is for arguments.” (Laughter.) That partridge comes in useful for me to-day. Mr. Newton is one of those men of whom we say “His heart is in the right place.” But in how many places! I can say this: if it be true that the partridge of Paphlagonia has two hearts, that partridge is only half as well off for hearts as Mr. Newton. (Applause.) He has had a heart for the Institute, a heart for his profession, a heart for the Ministry of Munitions, and, I know, a heart for his home and his friends. At all events, whichever of those hearts I have come across during these three troublesome years I have found it glowing. Now, really, this is no time for jesting, it is a time for farewell: not for sad farewell, but for serious farewell. We have to say “Good-bye” to our friend Mr. Newton on his leaving this Chair. But in doing so we congratulate him very heartily. He can leave his work here—his other work, no doubt, will go on—he can leave his work here full of a satisfied feeling that, under extraordinarily difficult circumstances, he has fulfilled his very difficult task. (Applause.) I do not suppose his friends ever, for a moment, thought him unequal to rising to these emergencies; but he himself, a modest man, must have sometimes wondered whether he would be able to fill so many posts at one time, and it certainly must be a sincere happiness to him to be



assured, as he can be by those who have met him in those many capacities during this period, that he has fulfilled his duties and their expectations in a complete and remarkable manner. (Applause.) I trust, as has been said before, that he will not really say "Good-bye" to the Institute, and that we may very constantly have his cheering and energising presence amongst us. (Loud applause.)

THE PRESIDENT: I now, as my last act as President, formally accept this portrait on behalf of the Institute. It somehow seems a little indelicate to talk about one's own portrait, but in this case I can very well speak about it as a work of art. I am sorry Mr. Hacker is not here to receive our thanks and appreciation for the fine piece of work he has done for the Institute. (Hear, hear.) I must thank Mr. Blomfield for all the kind things he said. I really hardly know how to thank Mr. Waterhouse. He has said so many pleasant things, and he always has that great gift of putting one in good conceit with oneself. Personally, I am very conscious of many shortcomings, not only in carrying out my duties as President, but in carrying out some of the other duties which have fallen to my lot. But I can say that, at any rate, I have done my best and I have not spared myself. (Applause.) If I have come up to your expectations, that is quite sufficient reward for me. But Mr. Waterhouse, again with felicitous phrase and deft handling, turns defects into virtues, geese into swans, and blemishes into beauty spots. Those in this audience who do not know me must not really believe all the nice things which Mr. Waterhouse has said, because I really could not live up to them; but I am glad to think that my successor will have my old friends—Mr. Blomfield, Sir Aston Webb, Mr. Waterhouse, and all the others who have supported me so warmly—to support him during his term of office. I am giving up with sincere regret, after three years of service, during which I have certainly learned to understand the saying "Uneasy lies the head that wears a crown," even though the crown be only that of the Institute during war time. This is my last official appearance, and, in taking my leave and thanking the Council and Members of the Institute for their support and help, I want to take this opportunity of specially thanking Sir Aston Webb for coming to my assistance at a time when my work at the Ministry of Munitions, which is of a delicate and difficult nature, was occupying a great deal of my time. I hope the work on the Architects' War Committee has not suffered, but, at any rate, I felt I was not able to give the time that should be devoted to it. Sir Aston Webb, although he was full of anxieties of his own, came forward and took the burden off my shoulders, and I would like to thank him personally for doing that. I can only hope, in bidding you farewell, that the same kind support will be given to my successor, Mr. Hare. I regret he is not able to be here this afternoon. I wish him the best of good fortune. (Applause.)

## NEW MATERIALS AND METHODS AS INFLUENCING DESIGN.

Discussion at the Fifth Informal Conference held at the Royal Institute of British Architects, 21st March, 1917.

CHAIRMAN: Mr. E. GUY DAWBER, *Hon. Secretary*.

Mr. H. D. SEARLES-WOOD read the following paper:—

When the Committee asked me to open a discussion on this subject I understood that at these discussions we were to deal with actualities, therefore I started by making diligent search for the new materials, and found, as a result, that there were no new materials that could by any stretch of the imagination be capable of influencing design. I therefore made a search for new methods, and probably owing to the distraction of the war I found very few methods that could be called new, and none that were of sufficient importance to affect design. The following is what I found. The new materials were corrugated asbestos sheets, which are used as a substitute for corrugated galvanised iron, and, owing to the great difficulty in getting any galvanised materials, may have a future before it, but no artistic merit. There are various new processes for waterproofing concrete, which are useful but do not affect the æsthetic treatment of concrete.

There is a Committee sitting at the Imperial Institute to interest architects and builders in woods from India, Nigeria and the Colonies; these woods are nearly all hard woods most suitable for joinery and furniture, but having regard to the difficulty in obtaining steel some of the cheaper hard woods may be used in the place of steel for stanchions and girders. The new methods I found were, Mr. Isaac Shone's "Cunta in Unum" system of house drainage that has a certain æsthetic value, as it reduces the macaroni-like decorations that the plumber inflicts on our designs under the plea of sanitation. I believe this system has a great future before it, but it wants energetic pushing, as it is opposed to the teaching and practice of sanitary experts, and the methods that the public has been taught to consider as the very gospel of hygiene.

The development of central heating, that is, the delivery of hot water to dwelling-houses for all sorts of purposes, as gas and electricity are now supplied, appears to be a business proposition, and if logically carried out might go some way to settle the domestic servant difficulty, and would result in important modifications in house planning in towns. But I could not find any description of any place where it had been put in actual practice, though such buildings as the Liverpool Hospital, where central heating is largely developed, show what the possibilities are. I have estimates on the basis of 50 houses of the rental value of £140 per annum to supply 80 gallons of hot water per diem for a hot water rate of £12 per annum, or, if a combined scheme for electricity and hot water were made, the hot water rate could be reduced to £5<sup>1</sup>/<sub>2</sub> per annum.

In America and Canada a device called a cement gun is being largely used for exterior stucco and interior plaster work. In principle the cement gun consists of two superimposed tanks, in the top one of which are dumped the dry materials constituting the mortar. From the bottom one the dry mixture is ejected by compressed air through a hose line with a nozzle at the end. To this nozzle a second and smaller hose delivers a supply of water under pressure, which is applied to the dry constituents just before they emerge from the nozzle. The mortar issues from the hose in the form of a spray with considerable force, and impinges on the surface to be plastered. It is claimed that the high pressure with which the mortar is applied produces an adhesion and strength that cannot be equalled by hand-applied methods.

The Eland joinery is a method for dispensing with the usual mortice and tension in joining and to produce a joint that is stronger and more easily assembled and interchangeable. It is an adaptation of the hand-rail screw, and for framing is a great saving of time and labour. The horizontal members can be either continuous in a straight line or can be staggered, so as to make a simpler joint.

There are several forms of blocks for building walls and partitions now being largely used in buildings in our parks and open spaces to house the new army of lady civil servants. One called "The Grip," which consists of 2½-inch or 3-inch terra-cotta slabs about 1 foot 3 inches square, and has diagonal grooves forming a lattice on the surface in which steel reinforcing bars are laid and the whole surface cemented over, is a strong form of this method; but none of these seemed to give any scope for discussion.

Faint, though pursuing, I asked the Office of Works to allow me to see the drawings of what they were doing for the munition buildings, in the hope of finding something there. I found no new materials, but perhaps some of their methods may be of interest.

The problem the Office of Works had to solve was to provide the accommodation required with the greatest possible dispatch, and with the limitations imposed by the difficulty of getting materials.

The result is that these buildings are constructed largely of wood. The big stores, 1,000 feet by 120 feet, are roofed by Belfast trusses of 60 feet span, formed with 4 inch by 1½ inch battens fixed with cut nails clinched, which are found to be better than bolts. On these purlins are laid and then boarded, it being difficult to get curved galvanised corrugated iron. The boards are covered with roofing felt laid in the same direction as the boarding and lapped against the wind. These buildings are lighted by skylights in alternate bays; the trusses are spaced 12 feet 6 inches apart. The skylights are glazed with one or other of the patent forms of glazing. The walls are timber framed, covered with ¾ inch rebated feather-edged boarding creosoted on the outside. The trusses are supported in the centre by wooden pillars

built up with 9 inch by 3 inch deals; the feet of the pillars are bedded in cement concrete blocks.

The flooring is generally cement concrete, sometimes reinforced, as it is not unusual to have shells piled up so as to give a load of 1 ton to the square foot. In covering large areas like this the question of levelling the site is a considerable difficulty, and it is found that a fall of 1 in 100 is not noticeable in the length of the building, and to save raising a floor 10 feet at one end is a great consideration. The effect of these 80 Belfast trusses, which are mere latticework and centre pillars in one of these stores, which is about 22 feet high, is quite impressive. One interesting point is that the level of the floors is taken at the level of the floor of the railway truck; these trucks are higher than the trucks used in the works which run on 2 feet tracks, so that these tracks are raised to bring the floor of the light trucks level with the floor of the railway trucks. Between the light trucks and the floor of the sheds there are trenches in which the workpeople stand, so that the shells standing on the floor of the shed are just bench high, and they can be manipulated with great ease. The result of this is that the shells never have to be lifted, but can easily be transferred from place to place. The rails of the 2 feet tracks are made of wood, with the edge protected by a steel strip rebated in the wood to take the bearing of the truck wheels.

In other workshops the roofs are of the saw-tooth pattern, constructed of wood, and these have wooden lattice girders with 4 inch by 1½ inch cross braces, and 7 inch by 2 inch top and bottom members; these are duplicated when shafting or cranes have to be fixed, and the conveyors or runabouts are similar, only with a rolled joist for the carrier to travel on, and the girders are supported with wooden tressels. The mess-rooms, kitchens, and offices are built with wooden framed walls, with breeze or terra-cotta blocks; the "Grip" previously referred to being sometimes used and sometimes 4½ inch brickwork, which is afterwards tarred. The roofs are often slated.

The only protection from fire from sparks from the engines is to limewhite the woodwork. In some of the sheds where special processes are carried out the walls are lined with white American cloth; it is found that this can easily be kept clean. The internal gutters in the Belfast truss roof are wooden box gutters, finished with felt and asphalt.

One of these sheds had to be built on a foundation of mud pumped out of the river, 16 feet deep. This was dealt with by means of a concrete raft, and a number of women were engaged in this concrete work. In this shed the returned empty cartridges and packing cases are repaired and refilled, and a large saving is thereby effected. The gas shells are tested by placing a cover over them with rats or mice in them, and these show if the shells are leaking; if they are found defective they are taken to a special building which contains gas cupboards, where the leaks are stopped without the gas affecting the workpeople.

A shell factory now being erected in reinforced concrete construction, covering 2 acres, was started on the 15th January, and one-fifth was finished on the 3rd of March. This building is one storey high, with a gallery; it has a saw-tooth roof, which with the beams carrying the plumber block and gangways to oil the bearings and open the ventilators and attend to the artificial ventilation, are all of reinforced concrete; there is only 39 tons of rolled steel in this building, in addition to the reinforcement, and all the steel is shell discard stressed up to 10 tons to the inch. There is nothing new in the application of the reinforcement. The speed of the work is due to the foresight used in arranging for all the materials to be on the site within a week of the start. The centering was one fourth of the area of the concrete. The cost was much less than a similar framed steel building, and it has the advantage of being fire-resisting. These buildings are quoted to show what is being done under present conditions, where restricted materials affect the question of design, and the last building brings me to what is not exactly a new material, but which will afford a subject for discussion, which none of the others, I am afraid, would.

I have tried to get illustrations of some modern reinforced concrete work, but in most instances have been told that the War Office will not allow them to be shown; but Mr. Percival Fraser has some interesting photographs of his recent work for the Maypole Dairy Company which show very original treatment of reinforced concrete for their margarine factory at Eltham, the place where the nuts are stored that the margarine comes from.

Professor Beresford Pite read a paper on the subject of reinforced concrete which I have his permission to quote largely, and which appears to me to bring out just the points that the subject was meant to give for discussion.

"I. There is no common artistic sense or experience which will enable the educated and cultivated world of to-day to accept the native and naked facts of a reinforced concrete building of ordinary purpose, such as a warehouse or office block, as anything else but barbarous, apart from some harmonious relation to, and reflection of, traditional architectural forms and proportions which by long usage and historic meaning have established themselves as alphabets and symbols of artistic expression in the building arts. Proportion in the abstract, as good or bad, is easy to talk about; it may be poetical, but is difficult to embody and unpractical. It would be idle—and this subject is a delightful *corpus vile* for exemplification—to direct an architect that his reinforced concrete building must be simply true to its material and purpose and rely only on good proportions for success and artistic effect. There is a good deal of professional and critical cant to the tune of the sufficiency and pre-eminent importance of good proportion. Let us suggest a simply corrective question: What is the canon of proportion that the prescriber specifically has in his mind's eye? If it is an indefinite perceptive sense of fitness, please apply it forthwith to this concrete case, wherein the height of every floor and practically the size and shape of every opening in the walls is settled by canons of use and practicability, whether warehouse, hospital ward, or mammoth residences. Queen Anne's Gate Mansions, Westminster, may, with all due

respect to their inhabitants, be suggested as a sufficient example of proportion settled by practical canons without reliance on architectural style or ornaments.

"II. Therefore, in the absence of artistic power to educe beauty out of the utilitarian factors of reinforced concrete building, we are compelled to adopt and adapt those past architectural forms which have canons of proportion and have attained by long acceptance a force of expression. These architectural forms are of age-long growth and development, and though they come to us in stone and brick, and therefore seem unsuitable and unreal if applied to a novel artificial material, we have none other with which to make that public appeal for sympathy which is the basis of the artistic sentiment.

"To put it crudely, the Classic forms of Greece and Rome, the Gothic forms of England, the Renaissance treatments of Italy, are after all the staple of the only possible architectural treatment of the reinforced concrete architecture of to-day.

"III. A third brief conclusion is that the application of colour, whether in simple tones or various patterns, to the surface of concrete buildings, though such treatment may be purely æsthetic, will not suffice as a satisfactory or as an architectural solution of the problem. The concrete mass necessarily has colour of some sort, whether, perhaps, the grey of a cement or the pink of an aggregate. This colour quality, which may be said to be native, may be modified for æsthetic purposes, but it really appertains to the texture of the building, and belongs to another branch of the subject. The propriety of securing an even consistency of tone or a clean contrast between applied cement dressings and the general surface of the wall is, however, to be mentioned here. The application of colour implies a direct intellectual exercise in æsthetics of considerable range. It also involves differences of colour material, though essentially between the red and white colour wash-bands of a sunlit Oriental front and the marble veneers of a mediæval Venetian palace there is little difference of æsthetic treatment. Each method is obviously applicable to walls of any core, from Babylonian earth mounds to reinforced concrete partitions. The æsthetic treatment of concrete would soon be settled, and its practitioners assigned positions in schools of painting and decorative art, if a superficial treatment were sufficient, whether in economical distemper or costly marble and ceramics. Imagination will soon fly to the Baghdad markets for tile, and to Byzantium for mosaic, and neither association nor scope will be lacking. But how in any scheme of superficial decoration shall we deal with the new problems of plastic form and design? Colour may be a palliative, an enrichment of surface, in that it accepts and does not control the forms of the building to which it is applied. Its application does not deal with the greater principles and factors of architectural effect, those of proportion, of light and shade, of grouping and of ornamental detail.

"IV. A fourth conclusion is, that in texture alone—that is, in the quality of the surface—lies the ultimate differentiating quality of the æsthetic of any building material, and especially of reinforced concrete. The architectural elements of a style may be all simulated in stucco, or, if of stone, even to the reproduction of pseudo-constructive jointings, and of such originally economic mason-craftiness as rustication. The vital æsthetic difference is that of texture. The simulation may extend to the superficial elements, but when detected, as it inevitably will be, under the stress of natural forces, the æsthetic value is sensibly lessened, and with the repulsion of artistic sense and sympathy condemnation follows. The feature of native materials has a special beauty; that of artificial materials, as of brickwork acquired by craftsmanship, both of manufacture and of laying and bonding, also has intellectual interest. It is to this essential or native character in concrete that we must look for its expression of texture. Though there is a touching interest in the impress of the timbering on the concrete work of the Roman Emperors,



modern fancy shuttering cannot be suggested, for there will be no lasting result from mere sporadic impulses of imagination. The creation of rusticated joints by sinking moulding fillets, or such-like methods of creating a surface design, need not be even proposed, for texture is that element which is solely necessary to, and therefore indispensably connected with, a certain material, and by which you may identify and appraise it. It applies not merely to the detailed description of smooth joined or rusticated treatment of a cement surface, but to the character of the area, its extent, and the necessary absence or presence of jointings, and other evidences of construction.

"The influence of texture is mainly felt in the design and treatment of ornamental detail. The relation of material to design compels attention in such ornamental details which involve consideration of facility or difficulty of execution. A hard and intractable material naturally restrains the mouldings and carving which are designed for execution in granite, while the surface of a pliant, easily wrought brick or stone wall suggests enrichment and delicacy of moulding. The suggestiveness both of modelled or cast mouldings and enrichments in plaster is also of a different character, and this difference is the texture. Modifications of form in the drawing of detail, owing to increased durability of the material, should be welcomed and insisted upon as emphasising a characteristic which it is foolish and timid to disguise. The absence of building-up joints is alone sufficient to afford a fine speciality to concrete design. The jointing of stonework, originally a painful necessity, as the ancient use of monoliths shows, has become an artistic resource of great value, artificially rusticated joints bearing evidence to this fact. The value to scale of such jointings is primary, but their relation to texture is certainly not to be forgotten. In concrete we have now monolithic walls, and this is fact and texture at once. The other quality of scale lost through the absence of jointing will have to be recovered by other architectural factors of detail.

"The summary of the brief conclusions that we have stated on this subject of unusual magnitude is negatively that:

"i. We have found no instinctive guidance towards an unbiased and fresh originality in the aesthetic treatment of both a novel building material and principles of unusual application.

"ii. That invocations of good proportion or of other abstract principles, though useful as weapons of criticism, are similarly of no assistance in creating a system of design.

"iii. That superficial colour treatments are insufficient for architectural expression, though valuable in assisting aesthetic effect.

"iv. Positively, that the texture of concrete surfaces modifies and imparts special character to any forms employed for architectural purposes. Therefore, while modern considerations of utility and of novel constructional methods determine the proportions, and may spontaneously—or subconsciously, if this may be proposed—develop qualities which acquire an aesthetic character, the only method by which definite progress in an architecture of concrete will be possible to us is by the scholarly and critical employment of the traditional plastic forms of architecture, modified by, and adapted to, execution in concrete."

I have given this long extract from Professor Beresford Pite's paper because it seems to me that these conclusions are equally applicable to other materials and methods of construction, and they are admirably adapted for opening such a discussion as is proposed to-day.

Referring to the suggestion of subconscious determination, I have one other quotation, and then I have finished. E. S. Dallas, in the preface to his book *The Gay*

*Science*, says that the author's purpose is to settle the first principles of criticism, and he in more than one direction anticipated by a generation the development of opinion. In nothing is this anticipation more remarkable than in his view of what is now called the subliminary self. This, he holds, lies at the root of all art. Aristotle's theory, that art is imitation, is, in his opinion, false, and has transmitted an hereditary squint to criticism. What art does is not to imitate what any eye can see, but rather to bring into clear vision what is first apprehended only by the hidden soul; art has to do with pleasure, but not alone with the pleasure which the sensual man recognises as such; there is hidden pleasure as well as hidden soul. It is everywhere the subliminary self which is active in art, and the subliminary self to which true art appeals.

Mr. H. KEMPTON DYSON: From one point of view there are no new materials, but there are certain new forms and new applications of old materials. I have made a classification of new materials and new methods in that sense, so as to keep my remarks in order while dealing with a miscellaneous collection of items which seem only to have in common the fact that they together emphasize the necessity of making changes in architectural forms.

## I. STRUCTURE.

### (a) REINFORCED CONCRETE.

Though the principle of reinforcing concrete by means of iron and steel rods has been in use since the early part of last century, it is only within the last twenty years that it has come into prominence for the construction of modern buildings. It makes it easy to obtain certain special features that require novel treatment, because no general method of building in the past has embodied such features and thus called for their aesthetic treatment. In common with steel, reinforced concrete permits of frame construction wherewith modern buildings may be erected with large window openings so as to afford the greater amount of light that is now in demand. In former times there was not the same call for large windows, nor is there the same insistence even to-day in domestic work. Gothic architecture in certain of its developments, it is true, afforded a wonderful amount of window surface, and consisted to a great extent of frame construction with hardly any panel walling.

Much of modern architectural practice consists in the erection of buildings to serve commercial purposes, and the maximum amount of daylight is desirable, not only from the point of view of economy, but of the comfort, convenience, and health of the workers who are housed in such buildings. One of the chief problems in office construction in cities is to provide ample daylighting, having regard to the narrowness of the streets and the areas at rear. The fenestration or treatment of voids is, therefore, a problem that has to be attacked by the architectural profession in connection with modern buildings. This

at the same time involves consideration of the treatment of the panel walling required between the framework of reinforced concrete or steel. The types of structures to-day are so different from those of the past that a new treatment is required which of itself should stamp our architecture as very different from that of any former period.

If the æsthetic treatment is a logical outcome of the mechanical construction it must be satisfactory once we become accustomed to it and able to appreciate the ability with which the architect has expressed a purpose or conveyed an idea *via* the material and method of construction.

As regards the treatment of frame construction, I for one see no reason to object to the clothing of a skeleton with a veneer of other richer and more variegated materials. The skeletons of men and beasts are clothed with flesh and skin that serve a purpose, and, if we choose, why should we not use tiles, faience, marble, stone, plaster, wood-panelling, wallpaper, etc., on the surfaces of buildings because of their uniformity, cleanliness, colour and other properties?

One can build walls of reinforced concrete very much thinner than those we have been accustomed to construct of stone and brick, and the thin wall is another problem that requires treatment. If reinforced-concrete walls are employed there are difficulties in regard to the finish of the surface. We may either plaster the walls, or mould them with a finished surface, or work a surface after casting. Mouldings can be cast upon flat surfaces with ease, though the form of such mouldings had better be such as can be obtained easily without damage in the removal of formwork; that is to say, undercut mouldings are generally undesirable, and, indeed, mouldings should be used as sparingly as possible to obtain the desired effect. As regards the treatment after casting, we can select the aggregates—*i.e.*, sand and coarse material, so as to give a great variety of texture and colouring, while the surface may be again varied by, say, scraping, scrubbing, chiselling, gouging and hammer-dressing. For economy these labours should be performed so soon as possible after removal of the formwork.

Another feature of reinforced concrete construction is the ease with which cantilever projections can be obtained. The other day I was reminded by Professor Beresford Pite that in Indian architecture there are examples of the development to a considerable extent of cantilever projection in timber, but in such construction any great overhang was only obtained by the superimposition of one cantilever on another. In reinforced concrete but one cantilever is required, and, moreover, it can be made economically of a shape more in conformity with mechanical principles than cantilevers that are made of materials such as timber and stone, into the form of which enter the practical aspects of economy of labour in conversion from the forms in which the materials are originally obtained.

A third distinctive feature of reinforced concrete is the way in which it lends itself to monolithic and continuous beam construction such as was never before possible. Past architectures, so far as I can see, help very little in the treatment of such monolithic and continuous construction. That again should make considerable change in architectural form.

As usually carried out reinforced concrete construction is monolithic and continuous, but there are not lacking advocates of pre-cast work *contra* in situ work. Undoubtedly insufficient attention has been given to pre-cast work; it may prove very economical in certain cases, but it would evidently require a different æsthetic treatment from in situ work.

Reinforced concrete is readily applied to the construction of domes, mansard roofs and lofts, which obviously form important elements in the general grouping and skyline of buildings. One can see also the suitability of the material for the construction of strong rooms, store rooms, basements, tanks, pile, caisson and raft foundations: all these will in some way affect the superstructure and the design.

Another application that comes within the province of the architect is the construction of bridges, which are now being extensively carried out in reinforced concrete.

The material is not only economical, but has the following advantages that were bound to lead to its extensive employment:—

1. Fire-resistance.
2. Immunity from decay.
3. Hygienic properties, being washable and sterilizable.
4. Possessing greater inertia because of its weight and monolithic character, resulting in reduction of vibration as compared with other modes of construction.

#### (b) STEEL-FRAME CONSTRUCTION.

There is hardly need to refer to the treatment of steel beams in themselves because the changes which they involve in architectural design by enabling larger spans to be employed have been thoroughly realised by architects. They entail a complete change in intercolumniation or the spacing of supports. An interesting study is the derivation of the Orders as the outcome of the materials employed and the facilities for obtaining labour and of transport. If the spacing of supports is much wider than before it seems that the Orders should go by the board, but I must say that I regret to see the Orders discarded for some of the horrors that have been perpetrated in the way of pot-bellied and non-tapered columns, both of which are in conflict with scientific principles of construction.

It is probable that in a few years we shall have a non-corroding steel commercially available for construction, but that will still leave us with the problem of fire protection. If such non-corroding steel is available we shall perhaps be allowed to see rivetting frankly expressed, just as we do the pins in old

half-timber work that serve a somewhat similar purpose to rivets.

Steel-frame construction is quite a special type, and reference has been made, in connection with reinforced concrete, to the use of large windows. Steelwork, of course, enables one to have smaller supports than reinforced concrete, though not always, if we take into account protection against fire and the advantages of monolithic construction in respect to resistance to wind pressure.

The clothing of the framework has been referred to in connection with reinforced concrete.

Steelwork, more than reinforced concrete, has undoubtedly entailed the problem of the adequate treatment of high buildings. We can, of course, if we choose, dismiss such structures from the ken of architecture because of their commercialism, but they have distinct advantages which must be recognised, and I for one do not see why architects should not endeavour to treat them æsthetically. Steel bridges, too, are often considered as solely within the engineer's province, but architects might with advantage be called in to assist in their design.

#### (c) ARTIFICIAL STONE, BRICKWORK SUBSTITUTES AND FAIENCE.

The surface treatment of concrete has been referred to under the heading of reinforced concrete, and most artificial stones are concrete. When, however, concrete is moulded into block or slab form the treatment of the surface naturally will require to be different. It would be quite appropriate to go in for elaborate ornamentation where the cost of the moulds can be spread over a large quantity and where labour is more under control, as in the shops, and can be more accurate than the labour on the site. It is, however, not right that artificial stone should be treated in exactly the same way as masonry—far too often "artificial" stone has been confused with "imitation" stone. Repetition ornament in artificial stone is easily obtained, as also in terracotta and faience, but it does not seem to me appropriate to have it heavily undercut or of great projection because of the difficulty of execution and cost of such work. Of course, for cornices at a great height it may be necessary to go in for considerable projection.

Artificial stone sills are now much used; labour is saved if the sills are carried right through the wall so as to save the boarding on the window backs, and the weather bars used in ordinary wall and window construction can be done away with.

Artificial marbles now on the market are too frequently imitative of natural marble. This suggests that such materials might be better treated by decorative patterning in colours rather than the usual promiscuous veining.

It is quite possible to glaze and polish the surface of concrete; terrazzo is a case in point, where if white cement be used with white marble chippings a fine effect is obtainable. In granitic finish on the other

hand the surface is merely trowelled and not rubbed down. It might be possible to use with advantage other materials than granite in such trowelled surfaces, and perhaps to remove any skin of cement by acids.

Slab partitions, although of the nature of artificial stone, hardly call for special treatment. Hollow tile blocks belong to the terracotta class and are as a rule plastered. It might be possible to use both concrete slabs and hollow tiles without a covering, in which case the jointing would require æsthetic consideration. Another material coming under this heading is asbestos-cement sheets, which lend themselves to distinctive treatment. Faience, either in the form of blocks or tiles, possesses obvious advantages for modern buildings, and can be appropriately applied to panel wall construction and in combination with reinforced concrete and steelwork construction.

## II. LIGHTING.

### (a) DAYLIGHTING.

Fenestration in modern buildings is a difficult problem that has been created by a material that was never possessed by builders of the past, namely, plate glass. The treatment of shop windows is a thorny subject with architects, but the problem does not end there. Carried to the extreme, plate glass has led to the creation of certain structures, viz., conservatories and aquariums, that are often attached to modern domestic buildings and therefore cannot be dismissed even by those architects who shun commercial structures. The large window awaits adequate treatment. The splitting up of window panes with numerous wooden or metal bars or leaded comes is much resorted to, but users of buildings know the trouble this entails in keeping the windows clean and their removal is frequently insisted upon. It may be very perverse of some people, but my feeling is that the position should be frankly accepted and an endeavour made to treat large panes of glass satisfactorily from the æsthetic point of view. The provision of large surfaces of glass is not only advantageous in respect to lighting and hygiene but is economical; glass seems to be about the thinnest wall; and though it be true that such thin walls lead to great loss or penetration of heat, a solution of the difficulty might be found in double glazing, which would, perhaps, serve to reduce the noise of traffic. Of course there are other aspects to the daylighting question, such as the use of refracting glass, pavement lights and bulk-heads, reflectors, lantern lights, sky-lights, fan-lights, glazed partitions, fire-resisting glazing—all of which evidently require special treatment. The gaining of every bit of light in confined situations requires the splaying of window cheeks. The windows, moreover, require to be regularly cleaned, so that some provision therefor might be made a feature in the design, such as permanent cantilevers for suspending travelling cradles or continuous balconies for the use of window cleaners. Obscured

and stained glass lend themselves to æsthetic treatment.

#### (b) ARTIFICIAL LIGHTING.

Nowadays we have a choice of illuminants, namely, coal gas, acetylene, petrol gas, electric light. The last has increased the value of basements and enabled us in modern buildings to gain advantage from constructing more than one basement. Three basements have already been employed on valuable sites and we may find five or more in use shortly. There is no need to detail the many ways in which artificial lighting can be treated, for architects have already successfully attacked the problem.

### III. WATERPROOFING.

#### (a) ASPHALT.

The War in forcing us to economise has emphasised the desirability of substituting other materials for lead and zinc, such as asphalt. The use of the material for horizontal and vertical damp courses has made basements valuable. The most extensive use of asphalt has been for flat roofs, which leads us to consider the possibilities of constructing ornamental and kitchen gardens on the roofs of buildings by the placing of earth thereon. Not only would changes of temperature be more equalised thereby, but the earth would make a bomb-proof shelter. Pergolas and belvederes would render flat roofs of further utility and pleasant in the summer. It is not beyond the bounds of possibility that in the near future continuous flat roofs may be required as alighting platforms for aeroplanes.

#### (b) SHEETINGS OF CANVAS, FELT AND BITUMINOUS COMPOSITION.

Tarred paper and the like are now coming into extensive use as substitutes for asphalt, while waterproofed canvas has enabled the provision of awnings, velariums and belvederes. Why not have semi-pergolas and open-air cafés?

#### (c) SLATES AND TILES OF ASBESTOS AND CEMENT AND SHINGLES OF TREATED WOOD.

Each requires appropriate treatment. Concrete slabs in imitation of weather tiling were used extensively by Mr. W. H. Lascelles for the construction of houses at Croydon from designs by the late Mr. Norman Shaw and Mr. Ernest Newton. Such imitation, while good enough to deceive almost the elect, was, of course, not legitimate, but it gave suggestions for proper æsthetic treatment.

Time does not permit me to deal in detail with other materials except merely to complete the list as follows, the headings of which will serve as reminders of the many directions in which modern architecture requires divergence from the past architectural forms that are too generally slavishly followed:—

### IV. INSULATING.

Cork, slagwool, asbestos fabric, sheathing quilt stuffed with seaweed for deafening or sound-proofing.

### V. FINISH.

- (a) Plaster and plaster substitutes.
- (b) Paving and flooring.
- (c) Carcassing.
- (d) Wallpaper and panelling.
- (e) Paints and decay preventers.

### VI. JOINERY.

- (a) Wrought and cast iron.
- (b) Reinforced concrete.
- (c) Papier maché and asbestos-cement.

### VII. EQUIPMENT.

- (a) Sanitation, plumbing and water supply.
- (b) Ventilation.
- (c) Heating.
- (d) Cooking appliances.
- (e) Lifts and staircases, hoists, cranes and conveyors.
- (f) Fire escapes and fire-protection.
- (g) Lightning protection.
- (h) Furniture and metal fittings.
- (i) Decoration.
- (j) Fencing.

Mr. PERCIVAL FRASER [F]: I would like to add my thanks to those expressed by the Chairman to Mr. Searles-Wood for his excellent Paper. It is right up to date, which is not always the case, I am afraid, with Papers read before this Institute. I think Mr. Searles-Wood should have fixed a period or epoch in which he could have categorised his "new" materials. Does he consider cast-iron, for instance, among the new materials, or does he include constructional steel or reinforced concrete? Up to the introduction of cast iron and, later, wrought iron and steel there had been no marked effect on architecture by the influence of new materials or methods of construction for hundreds of years. But from that time till to-day it seems to me that almost every decade witnesses a striking change in construction, and consequently in architecture. This, I think, is very different from Professor Beresford Pite's conclusions, which, I may say, I disagree with almost in their entirety.

Glancing through the Paper, I note Mr. Searles-Wood says that after a "diligent search for new materials" he found that "there were no new materials that could, by any stretch of imagination, be capable of influencing design." That is a tremendous statement to make, and one I emphatically dissent from. My point is that what influences the shapes of construction should, automatically, influence design, and any attempt to combat that influence is wrong. And it seems to me there has been a very strong attempt, in past years, to mould materials to conform to traditional schools of architecture, which, I think, is bad from the very root. The author has, apparently, found only one new material, and that is corrugated asbestos sheets, but these, he says, have no artistic merit: we can concede, however, that they are superior to galvanised iron in colour and texture.



The material he mentions for partitions is very good. I have used it for unsupported panels, 21 feet by 15 feet, the finished thickness being about 2½ inches. Here, for instance, we have a material which is bound to influence design. Belfast roofing, again, which is built up practically of scraps of timber, is cheap and particularly useful. I have used it for spans of 102 feet clear, and here we have a new method of construction which must instinctively influence the architecture of the building in which it is employed. I am glad to note that the author touches largely upon industrial buildings. My impression is that in the past ten years there has been a growing tendency on the part of factory owners to beautify their buildings, and I find this tendency increasing. Nowadays, if an architect takes the trouble, and persists in his point, he generally succeeds in getting the building owner with him in the end, with the result of a good-looking building and a real asset.

Passing on to the quotations from Professor Pite's Paper, I heard that Paper read some years ago, when it was rather a mystery to me, and I believe to many others who heard it. As I read it, he says, for instance, that a reinforced concrete building of ordinary purpose cannot appear to the world as anything else but barbarous. In the absence of any possibility of understanding what he means by that, I can hardly argue against it: but that a building frankly illustrating its purpose in its type of construction should be deemed barbarous seems to me to involve a misnomer, for that is precisely what it is not. Barbarous means something which is other than scientific in design and construction. A warehouse or an office building affords or should afford great evidence of science and art, for it is a standing monument of the two. The Professor instances Queen Anne's Gate Mansions, Westminster, as proving his point that good architecture does not wait upon good proportion; but it seems to me that can only be instanced as a deplorable example of a lost opportunity. There is no doubt a block like that, especially owing to its possibility of being seen from a considerable distance across St. James's Park, might, with real treatment by a real architect, have been made a magnificent pile of distinctive design. As it is, it is particularly impressive by its mere bulk.

Professor Pite says that colour treatment will not suffice as a satisfactory or as an architectural solution of the problem. But I do not agree with him again there. Of course, colour treatment alone cannot be a solution to an architectural problem, but if the architect has designed his building for colour treatment, the two must run together, and, if properly carried out by a qualified architect, *are* a solution of the problem. If the result is successful, I say the colour treatment, from its inception, has constituted the solution of the problem. He goes on to say—which seems contradictory—"the application of the colour implies a direct intellectual exercise in æsthetics of considerable range." Of course that is so, though a

little before he seems to decry it as a dispensable appanage.

With regard to the effect of new methods on both construction and architecture, reinforced concrete perhaps must form the best basis on which to develop one's arguments; and in reinforced concrete we have a number of essentials which, in my opinion, must or should affect buildings architecturally. Many of those essential points have been mentioned by the previous speaker, but, among others, the following stand out as strongly governing design. First, the unique monolithic construction; then there are the possibilities opened up by the extraordinary lightness of construction, and again by cantilever and bracket effects. Also the feasibility of suspension from above, useful, say, in the case of fan vaulting, the ease with which sunk panels can be formed, and cylindrical and barrel motifs. And, almost the most important of all, the fact that, given a suitable ornament for casting, this can be repeated in the building indefinitely at low cost. Assuming that reinforced concrete is being handled by an architect with a proper perception of what is artistic and proper, he has a material which can be moulded into decorative constructional features (that is, not appliqué ornament, but cast in the carcase of the work), and it must be found to affect the architecture of that building.

Another material which should have a very great effect on architecture is steel. The influence of mild steel construction on engineering works is beyond all calculation. From it we get constructions like the Forth Bridge, which, I think, is an admirable example of the use of a new material automatically building up a new school of design. And then, of course, we have the awful example of the Tower Bridge, in which a very great opportunity has been missed, one which should have been turned to good account. To my mind, it is somewhat of a slur on the architectural profession that these two materials have not had more influence on architecture. I say that materials like mild steel and reinforced concrete should revolutionise architectural design, but there seems to be always that strong tendency to distort the new materials to conform to architectural tradition, which I think is so extremely bad, and it argues a paucity of ideas, a lack of courage, or inadequate scientific training. The true influence of steel construction is demonstrated in Mr. Joseph Pennell's "Unbelievable City," New York, and elsewhere in the States. Whatever opinion one may form of the architectural merit of the modern skyscraper one must admire the courage with which American architects have endeavoured—often with conspicuous success—to adopt the traditions of architecture without crippling modern industrial needs.

That skeleton steel construction is capable of æsthetic treatment is illustrated by the Pennsylvania Railway Terminus in New York. In the construction of that building no endeavour has been made to cloak the steel work, and the effect is excellent. This

new architecture is also common all over the Continent.

The new materials which Mr. Searles-Wood could not find are, in my opinion, very large in number. Mostly they have been mentioned, but I would instance the following in particular. There are the bitumastic roofing felts, which permit flat roofs at a low cost, and, for that reason, influence design. There are the metal window sashes and shop fronts designed frankly for expanses of plate glass, which has given rise to a school of architecture to be known, I suppose, as shop-front architecture, with, I hope, a great future before it. Then there are terra-cotta and glazed facings, such as are seen at the South Kensington Museum and the Savoy Hotel, in both of which an endeavour has been made to design a building in accordance with the materials at hand. Then there is fibrous plaster for decorative work and artificial stonework for external walling. Also we have recently seen a revival of timber construction, which I trust has come to stay. There is, again, the lattice girder roof construction which allows of a free floor area running into upwards of 70,000 feet in my own experience. A construction which permits of areas of that sort is obviously eminently suitable for many forms of manufacture. There is also asbestos for tiles, a suitable material for temporary buildings, patent roof glazing, wall-papers, electric light fittings, heating appliances, special paints, distempers and plasters. Then, again, special pavings, such as the "stone-wood" type, which are decorative, cheap and hygienic. One could go on almost indefinitely categorising new materials, all of which, I say, must or should, in greater or less degree, affect the architecture of to-day.

To deal exhaustively with the subject which Mr. Searles-Wood has so ably introduced would involve the separate consideration of each new material and method of construction with an endeavour to define its possibilities; thus only the architect can ask himself: "What is the legitimate use of this new material and will it afford me a wider sphere for my work?"

SIR HENRY TANNER, C.B., I.S.O. [F.]: I was asked if I would attend this meeting and I replied that I did not know of any new material, and I do not think, from what has been said this afternoon, that my opinion has been changed. What we come to is the development and adaptation of old material which has been in use for very many years. Plate glass was in use when I was a boy, also steel and cast iron. But what we come back to is, and what we have to do nowadays is to adapt our old material to modern uses. That is what everybody is trying to do, and the effect is judged mainly by the influence it has on people's pockets, especially nowadays or in the future, when nearly everyone is or will be poorer than he was, everything has to be done in a more economical manner. For instance, in America you get a very elaborate-looking building with, perhaps, a cornice 6 feet wide, which is made of sheet iron. The majority

of things will have to be obtained in a cheaper way. Of course, asbestos is not a new material either. I have for years used asbestos sheets for covering hot-water and other pipe chases. Mr. Searles-Wood goes on to speak of wood. Of course, wood is getting almost impossible, and that is what people have not sufficiently turned their attention to, to see what cheaper material they can get to answer the same purpose. I do not think it will be much good to try and get these hard woods from Africa which have been spoken about, unless there is a big demand and a large market here for them. I have tried all sorts of hard wood. Honduras mahogany is very well for ordinary tables, but it is not suitable for hard wear. Then there is wood. I obtained Padouk for a long time, but subsequently there was no supply, and when that happens one is put to much inconvenience: it has been put into the specification, you are told the supply is exhausted, and something else has to be substituted. That upsets your calculations and terms are difficult to arrange. As to central heating, I should not wonder if that were done in London, but a very extensive subway system would have to be constructed at enormous expense to start with. I have used it on rather a considerable scale in such instances as the Duke of York's Military School, Dover, and some hospitals. I think all the things which have been mentioned are more or less adaptations of old materials. When you come to speak of plaster, it is very similar: the blocks are simply developments. We began with concrete blocks and that has been gradually developed, so that now there are plaster blocks or slabs. As previous speakers have said, reinforced concrete is bound to alter the construction of buildings: whether it will alter their general appearance is another matter. The tendency is to cover them up and to treat them in the same manner as buildings constructed with steel framing. I do not know whether anyone has had experience of sawdust floors, but they make a very neat flooring, for a time. If water has access, however, and the concrete floor below is at all porous, the acid which is used in the covering attacks the steel joists and they are more or less destroyed. I do not think there are any other observations I have to make, except that steel, at its present price, is so extravagant that every effort should be made to cut it down. I should think that not only is reinforced concrete of great advantage, on account of the small quantity of steel required, but it would be more desirable still if we could get some modification of the Building Bye-laws in regard to the use of steel in London. It is unnecessary to give a 25 per cent. factor of safety, especially when the floors are of concrete and steel joists; one-third is ample in many cases.

MR. MATT. GARBUTT [F.]: I am surprised to find some of the ancient American methods spoken of as either new or as having anything to recommend them. I recollect that thirty years ago some enterprising people in Brownlow Street, Holborn, were

putting on the market certain stamped tin sheets, by the nailing on of which they claimed that any building could be converted into a fine work of architecture. A man from Boston "put the architecture on," and it could be painted any colour you liked—granite or anything else. I am surprised to find it mentioned as something either new or admirable. What is Art? What is architecture? These munition buildings, which are frankly put up for two or three years' service, and are not likely to last more than ten years, may be artistically done, but are they architecture? They are temporary, ephemeral things, good in their way and for their purpose. Should we regard them as serious work? They can be made to look æsthetic and satisfactory, but I do not think that they should be regarded as coming within the scope of this discussion. As regards imitation, there you are up against a principle on which there has been much dispute; for since the world began it has been the practice to imitate one material in another. Mr. Dyson referred to the simplicity of cantilever work as being a virtue peculiar to reinforced concrete. Cantilever work arises naturally. Cantilever brackets prevailed all over the world, but they have gone out in the last century or two, because we have ceased to put up pure timber frame-work building. The typical bracket, I suppose, belongs to China originally, though it seems to prevail over the whole East.

Mr. FRANCIS HOOPER [F.] pointed out that some of the suggestions were almost impossible under present building bye-laws. The authorities were prepared to do things now which they opposed before the War. The time then was opportune for taking some step, so that some at least of the methods put before the meeting could be applied, and he suggested that the Council of the Institute might move in the matter.

THE CHAIRMAN: I must say I agree with Sir Henry Tanner. I was taken with surprise on hearing designated as new materials many with which we have been acquainted all our lives. The only really new material we have to deal with is reinforced concrete. That, in commercial and public buildings, is going to revolutionize building in this country. There is no question that for commercial buildings we shall never return to the expensive, bulky walls and structures that we have been accustomed to. The introduction of ferro-concrete has, again, altered our outlook upon the architecture of buildings. We are agreed that it is a mistake to attempt in one material to imitate another. To make what is practically a plastic material like concrete to imitate in its decorative treatment stone or brick is wrong; it should be treated entirely as a new material. You get dignity and character out of any material if it is rightly adapted to its end and purpose.

One of the speakers raised the point as to whether these reinforced concrete buildings could be rightly clothed with a veneer of another material. I think if

that material is treated as a veneer purely and frankly, and not meant in any way to disguise or to imitate another construction, it is certainly legitimate. With regard to other materials, it is evident that we shall have to face the fact that wood will be difficult to obtain for many years to come. That, in one way, will be an advantage, for we shall be compelled to use material which is fireproof, and economical in the matter of space. There is one thing that this marvellous amount of building we have put up during the last two years has done, and that is, to bring out the ingenuity of our engineers and architects. Enormous buildings have been erected, the main necessity of which has been cheapness, rapidity of construction, and the use of the materials at hand, especially timber, much of it small scantlings, and of very poor quality. These buildings are not meant to be permanent, but they have brought out in a wonderful way the resourcefulness and ingenuity of our designers, in producing the wide span roofs that Mr. Percival Fraser referred to. So much we have to thank the War for; in former times we should have depended upon steel construction, whereas now we have to depend on the materials we have in order to produce the quickest construction. Another point I would make is, that this cheapness of building, this reinforced construction, will make us consider the question of our hospital construction of the future. It has always seemed to me that with the development of plan, treatment and outlook of our hospitals, and the advance of medical science, we have in the past made a great mistake in building these structures in such a massive and permanent way. We have spent vast sums of money, only to find in a few years' time that the buildings were out of date in planning and construction. I think that with the new methods of treatment—for surgical cases at any rate—that the war has necessitated, our hospital planning will be very different in the future, and that we shall erect buildings in a more economical manner, so that in a few years' time they can be pulled down, and put up on other sites in another way.

#### Books Received.

- Lombard Architecture. By Arthur Kingsley Porter. 4 vols. 80, 19 6. 850 net. [Yale University Press · Oxford University Press.]
- ▲ History of Ornament, Ancient and Medieval. By A. D. F. Hamlin, A.M., Professor of the History of Architecture in Columbia University. With 400 illustrations. 80. New York and London, 1917. 15s. net. [The Century Co., New York; B. T. Batsford, Ltd., 94 High Holborn.]
- The Planning of the Modern City. By Nelson P. Lewis. 80. New York 1916. 16s. 6d. net. [Wiley & Sons, New York; Chapman & Hall, Ltd., London.]
- The Italian Orders of Architecture: A Practical Book for the Use of Architects and Craftsmen. By Charles Goullay, A.R.I.B.A., Professor of Architecture and Building in the Royal Technical College, Glasgow. 40. Lond. 1917. 6s. net. [Edward Arnold, 41 & 43 Maddox Street, W.]
- Wayside Crosses. Prepared under the direction of the Advisory Committee of the Wayside Cross Society. Pamph. Lond. 1917. [Chiswick Press.]
- ▲ Guide to Draughtsmanship: For Architects, Civil and Mechanical Engineers and Surveyors. By W. Horace Smith. With 40 illustrations, including 19 plates. 80. Lond. 1917. 2s. 6d. net. [E. & F. N. Spon, Ltd., 57, Haymarket.]

## REVIEWS.

## AN ARTIST'S IMPRESSIONS OF THE FRONT.

*The Western Front. Parts I.-V. Drawings by Muirhead Bone. Published for the Government from the Offices of "Country Life."*

It was one of the rare inspirations of the late Government to send out one of the most accomplished of living draughtsmen to record his impressions of what he actually sees at the Front. Photographs are usually misleading. They misrepresent the scale, and put the stress on the wrong note; and I have always found that ideas of buildings formed from photographs have to be recast in nearly every particular on seeing the buildings themselves. One has only to compare Mr. Bone's drawing of a great gun with a film photograph of it to realise that the latter, in spite of its mechanical accuracy, fails to catch the life and spirit of the thing. An artist, with the sensitive vision possessed by Mr. Muirhead Bone, seizes at once on the idea of his subject, and the subtle resources of his line enable him to present it in unhesitating transcript. The choice of Mr. Bone was the more satisfactory because, though there are many fine draughtsmen among the artists of this country, Mr. Bone has, from the first, shown his enthusiastic affection for the drawn line, a line that seldom falls below the level of his thought, modulating itself instinctively to express each fresh phase of vision; and Mr. Bone's vision is swift and searching. He has the unerring instinct that goes to the heart of the things in front of him, seizing on the essential quality to the exclusion of all that is irrelevant to his conception of the subject as he sees it. It is by his possession of these qualities as an artist that Mr. Bone is so well qualified for the task he has in hand. In the turmoil of war exhaustive accuracy in detail is out of the question. It is impossible to see or recollect everything; what one wants is the salient impression of the things that happen and the place they happen in.

In regard to the latter, to the locale of these tremendous happenings, Mr. Bone's drawings are most vivid. The desolate plains of Flanders, the strenuous labour of the workshops, the enormous power of our guns, the Tanks with their hint of some prehistoric monster, half-grotesque, half-terrible, are all the more vivid because Mr. Bone's method is one of suggestion, not of literal insistence. On the other hand, more must not be expected of it than it sets out to do. No student of military science could find these drawings of value, and herein they differ widely from the very interesting bird's-eye views of Mr. Wyllie, or the line engravings in the Cabinet du Roi, that vast collection made, as we all know, to celebrate the glorious actions of Louis XIV. A large proportion of the plates in the twenty odd volumes of the Cabinet du Roi is devoted to the illustration of his Majesty's military exploits. On the rare occasions when the King took the field himself, Van der Meulen, his battle-painter, went with him, to collect material for his historical pictures. These, of course, were full of detail, but the central

figure is always the King, here unmoved by the perforation in the side of a wretched war-horse wallowing at his feet, there in one of those attitudes of heroic majesty that nowadays appear to be the especial prerogative of actor-managers. But, besides these pieces, there are in the Cabinet du Roi many plates of the besieged cities taken by the Royal arms—Cassel, Maestricht, Mons, Liège, Namur, and the familiar names in the cockpit of Europe that are thrilling us to-day. The draughtsman's method was always the same, a finely designed frame with a bird's-eye view of the town and of the opposing forces. In the plates of Arras the trenches, the strong points and redoubts, the communication trenches and the position of the saps, counter-saps and mines, are all clearly shown; and thus, though "the days of the Beau Geste are numbered," there might seem to be nothing new. Even the German method of attack, in wave after wave of solid masses, is shown in these engravings of what happened over two hundred years ago.

Yet the whole atmosphere of war has changed. These fine engravings of the Cabinet du Roi express exactly the methods of warfare of Louis XIV., its deliberate procedure, its exact and almost punctilious ceremonial. Modern warfare, infinitely patient and scientific in preparation, is yet swift and unexpected in action, and all the gilt is off it. Mud-coloured uniforms, guns and trenches concealed where possible with ingenious camouflage, these are our substitutes for the pomp and circumstance of war. We are back to the bedrock of hard facts and the fierce fighting *trav*, and it is this aspect of war that Mr. Bone has caught with true and vivid insight. He has grasped the imaginative setting of the grimmest conflict the world has ever seen.

As is inevitable in work done under such conditions, the drawings are unequal. Mr. Bone is less successful with his figures than with other aspects of his subject; and certain drawings show a little carelessness as to the atmospheric planes. In a drawing of a ruined church all the parts are equally close to the eye, a fault remarkable in such a master of atmospheric perspective as Mr. Bone. On the other hand, No. 81, "Oiling," a bird's-eye view of the deck of a great battleship taking in oil fuel at sea, is a perfect and wonderful drawing, and I doubt if anyone but Mr. Bone could make such a drawing. He has managed to convey the idea of immense size and intricate detail without confusion: more successfully than in the drawing of H.M.S. "Lion" in dry dock, fine though the latter is. Mr. Bone can draw anything he sees, but I think he is enjoying himself most when he is drawing one or other of two sets of subjects, quite remote from each other. The first is machinery, cranes, or interminable workshops, a whole tangle of fine-drawn lines which Mr. Bone alone can reduce to order, and which show his old admirers that he has not lost the cunning of the hand that drew "The Great Gantry" and "The Last of Newgate." No. 62, "Setting up an Aeroplane in a Shop," No. 64, "The Giant



Slotter," No. 67, "The Night Shift Working on a Big Gun," and of course the first drawing of the Tank, are characteristic and splendid examples of carefully considered and yet most imaginative drawings. At the opposite pole are those delightful sketches, sometimes mere notes, of scenery, which Mr. Bone appears to be able to do "on his head," as the phrase is, so suggestive of far-spreading landscapes, touched in with perfect skill, and the work, apparently, of five or ten minutes by the roadside. Such are No. 73, a train of lorries coming up a road, and No. 24, a delightful drawing of cavalry in the distance, wending its way along a road which meanders through an open rolling country. There are drawings in the collection hardly worth their place, but in those I have mentioned, and in many others, Mr. Bone is at his best, and his best is inimitable.

REGINALD BLOMFIELD [F.].

### RECONSTRUCTION.

*Préliminaires d'Art Civique mis en relation avec le "Cas clinique" de la Belgique.* By Louis Van der Swaelmen. 10½ by 7½ inches. 1916. [Leyden: Société d'éditions; A. W. Sijthoff].

The Institute is indebted to the author for the presentation of a copy of this book on the subject of town planning as applicable to the reconstruction of Belgium and the devastated portions of the North and East of France. The author does not dwell on the cruel aggression of the treacherous Hun. His is a clarion call to the world's workers to prepare for the new order which is at hand. Far from being cast down he is full of hope for a glorious resurrection, and welcomes with gratitude the prospect of reconstruction in a better and a worthier way.

The volume is written to stimulate general interest on the subject of not only urban but rural life, and to awaken the civic conscience at this unique time to a realisation of the potentiality of towns as vital and vivid organisms. Keeping this object in view the author has written on those geographical and physical features of sea and river, of mountain and plain, which have given the town its special character and influenced the direction of its growth. He shows, too, how other factors, economic, hygienic, and political, operate in its development and determine its character—be it industrial, commercial, educational, curative, administrative, or otherwise.

A proper study of the problem of town planning must embrace all the scientific and æsthetic knowledge available with regard to each town and village: and all the information that can be obtained concerning the well-being of a community should be collected and recorded. This the author suggests should, after proper classification, be deposited in a suitable building not only for the guidance of the expert whose study it is, but for the instruction of the general public whose interests are at stake.

Within the comparatively small compass of the

volume at hand there has been gleaned a wealth of information which must prove of immense service to those interested not only in the reconstruction of Belgium, but in the future development of communal life. In Belgium, that land of cruel experiences, the author hopes to see the realisation of all our knowledge and vast cumulative resources in a new era which he welcomes in its freshness as a happy substitute for much that was old and decrepit.

The future of town planning is full of promise and we appreciate a prophetic vision which sees towns and villages of true beauty. Cities in their *ensemble* can still be planned with a capacity of expression as real and living as was ever found in the past, and on a scale to rival even the vast schemes of Le Nôtre. Those who are equally inspired will realise them in a splendour responding in growth to a wealth of new ideas.

Mr. Van der Swaelmen is frankly modernist. Though he looks upon the past as a splendid patrimony at the disposal of the town planner who will use it aright, he does not sympathise with the sentimental desire of those who wish to repeat the old as such and who would create a factitious antiquity "odious in its derisive effrontery." Art he sees as a functional emanation of life itself which cannot be slavishly copied from the past. Buildings in themselves have a capacity of expression and need not follow antiquated types. Our great railway stations, bridges, and viaducts, industrial and commercial buildings, hospitals, libraries, baths, State and civic buildings all give opportunity of new expression on a scale of magnitude equal to any of the monuments of antiquity.

Two considerations must always be borne in mind—the material claims of utility and the equally insistent appeal of the spirit for beauty. The author sees harmony arising from the combination of these and expresses his creed as a rigorous adaptation of the object to its purpose in rhythmic beauty. ("L'adaptation rigoureuse de l'Objet à sa Destination est génératrice de Beauté, tout au moins d'Eurythmie.") He sees in modern mechanical appliances a type of industrial beauty which in simplicity and directness is not only expressive, satisfactory, and instructive but should prove a helpful guide to creation in the plastic arts. In Style, which arose in the pre-archæological era, he sees merely the imprint upon tradition of life itself in its effort to create.

Mr. Van der Swaelmen deprecates the dissociation of the treasures of the past from the life of to-day. Following the ideas of Mr. Robert de la Sizeranne, he recommends decentralisation, part of the collections now exhibited in the museums being distributed amongst the churches, the civic buildings, and the education institutes. The works retained would then be arranged chronologically in a series of rooms with an adequate setting so as to evoke the feeling of the epoch to which they belong. In some of our museums this is already being done, but the merely archæological aspect still hangs heavy in the atmo-

sphere, and many of these depositories are still weary wildernesses which have been aptly described as cemeteries of the fine arts.

In Appendix No. 1 Mr. Lanchester's paper on the Civic Development Survey as a War Measure (published in the JOURNAL of 9th January 1915) has been developed for application to the problem of injured Belgium, grateful acknowledgments being made to the author.

In Appendix No. 2 is published an encyclopedic compendium on civic art, containing a commentary on the fundamental principles of urbanisation and an analytical guide for its comparative study, as elaborated by committees of l'Union Internationale des Villes, the International Garden Cities and Town Planning Association, London (Belgium Town Planning Committee) and the Comité Néerland-Belge d'Art Civique, The Hague, Amsterdam. This highly co-ordinated section of the book occupies 130 pages and is so arranged that it can be augmented as the subject is developed. It is established on the same principle as the decimal classification in use at l'Institut International de Bibliographie, and is on lines defined by Mr. Paul Otlet; it covers every imaginable subject which bears on town planning, is divided and subdivided on most scientific principles and shows something of the extent of the studies that will be required from those who will be responsible for the work of reconstruction and town planning.

Generally the volume is not only interesting but suggestive. At times there are lapses into scientific words not in general use, accompanied by a somewhat turgid phraseology, but the optimism and enthusiasm of the author are evidence of those vital forces which seem to be growing during the titanic operations of the war, and which will be invaluable in the inauguration of a new and promising era in Belgium.

HERBERT WIGGLESWORTH [F.].

#### VOCATIONAL ORGANISATION:

*Being part of a report of the Committee of the Fabian Research Department on the Control of Industry submitted by Sidney and Beatrice Webb and G. Bernard Shaw. [Special Supplement to the "New Statesman," April 21, 28.]*

Quite unknown to the greater public, even to those who, with more or less reason, can be considered as belonging to the minority who are interested in things that matter, there exist a few societies which devote their energies to investigating the causes which have led to the unwholesome type of civilisation in which we live. From the nature of things such a form of activity must necessarily involve a criticism of orthodoxy and convention, and is a work only accomplished in face of dull suspicion and inertia by those who are probably among the more discontented and alert members of the community.

Chief and oldest of these societies is the Fabian Research Department, whose report upon Professional Associations arising out of their general investigation on "The Control of Industry" was published in the

*New Statesman* as a supplement on 21st and 28th April last. This report, which has been made with a view to discovering from the experience and achievements of the various professions how it might be possible for each to play a more adequate and considered part in the future conduct and control of industries and services, deals with the professional organisation among lawyers, medical men and teachers, painters, sculptors, musicians, actors, writers, and also those who are termed the technicians of industry—i.e., architects, surveyors, engineers and chemists. Nothing quite like this supplement has appeared before, and it is of special interest to architects, as it is a criticism from the outside shewing, in a comparative manner, how the profession has developed in this country.

As far as the architects are concerned, the report commences by reference to an initial organisation of the social club type in 1791, twenty years later than the dining club of the engineers started by John Smeaton.\* The development into a permanent Institute came about in 1834, but even then there seems to have been no idea of establishing a large and far-reaching organisation; it was rather an amateur and dilettante association composed of architects and other gentlemen who for several years pursued a respectable and undiscerning course, untroubled by the economic changes which were growing around them.

The report gives a condensed but fair summary of the later history of the profession, which, to a great extent, is the history of the Royal Institute of British Architects, embracing as it does the questions of education, registration, professional etiquette and remuneration: the franchise and eligibility of the governing body and the gradual recognition of the Institute by the State, etc., all of which questions in one form or another it has been the experience of nearly every professional association to have to discuss more or less acutely.

Doubtless quite unconsciously an initial mistake was made in the constitution, or rather the organisation, of the Institute, a point which has not altogether escaped the attention of the Fabian Research Department, as is suggested by the following quotation:—"The function of the architect was not regarded as that of directing and supervising the erection of all the buildings of his country, whatever they were; but only the designing and planning of such among them as were intended or desired to be beautiful." Thus the art of building, hitherto regarded as one, in previous civilisations, was in the last century split up in an arbitrary and illogical manner between architects and engineers, the work of architects being considered to lie in the direction of construction tempered by "fine" art, that of engineers being confined to works of construction and utility, a somewhat raw combination, this dual control of building activity taking the place

\* I am reminded by Mr. A. E. Richardson that the following gentlemen started the Architects' Club of 1791:—Robert Adam, Robert F. Brettingham, J. Carr, Wm. Chambers, James Gandon, Thos. Hardwick, Richard Jupp, James Lewis, Robert Milne, Richard Norris, James Paine, Nicholas Revett, Thos. Sandby, John Soane, John Venn.—W. E. V. C.

of the older and more comprehensive organisation under which "fine" construction was produced. This is undoubtedly a development upon wrong lines which adds its quota to the present muddlement. Mr. Bernard Shaw, who writes on Professional Association in Literature and the Fine Arts, deals very shortly with "the designing and planning of such buildings as were intended or desired to be beautiful." According to him, architecture by its very nature is related to the Institution of Civil Engineers much more closely than to painters; this is certainly an idea which should be emphasised at the present time. But as presented by Mr. Shaw, without any sufficient context to explain its meaning, the statement can only be regarded as a half truth of a somewhat conventional type, and is therefore misleading in that it overlooks the fact that architectural design is an activity pursued for its own sake, sufficient as an end in itself.

In considering the probable future growth and development of the various professions—architecture included—three tendencies are pointed out as important, due, for the most part, to the increased demands made by a civilisation becoming more and more technical, exacting and detailed: namely:—

1. The tendency toward the supersession of the individual producer or small working master by the capitalist firm on a large scale, whose object is not so much the service of the public as the sale of wares; and still more by the Joint Stock Company and gigantic trust involving the employment of specialised classes of brain workers working for a salary.

2. The tendency of municipal and other public bodies to encroach upon the domain of the private practitioner in the person of its salaried officer.

3. The tendency to split up into smaller organised groups of practitioners, each specialising upon a particular part of the function, rather than that each individual should undertake the whole service.

The due appreciation of these three points is of importance to the architects of to-day and to-morrow: for whether modern tendencies are healthful or otherwise, they exist and have to be reckoned with; they may be controlled; their rigour may be annealed; but they cannot be eliminated, much less ignored.

The report has done what it can for us in conducting to tidiness of mind by setting forth the state of affairs as it exists at present: shewing how this state of affairs has arisen and suggesting lines of probable development. It remains for architects, engineers, and the rest of us to ensure that the readjustments which are now taking place shall be conceived on lines not only beneficial to the individual, which is the method of the Trade Union, but also on lines by which the community may best be served. It seems that the whole of the building activities of the country need better co-ordination—the illogical severance between architecture and engineering must disappear: there is no such thing as a scientific frontier between the two. But very little can be done in this direction

without a cordial *rapprochement* between the Royal Institute of British Architects and the Institution of Civil Engineers. Further, as similarity of interest is the only possible basis for unity of organisation, neither the master builders nor the men can be left out of any scheme that will work. Again, it seems inevitable that the tendency will harden for the salaried official to supplant the architect in private practice.

The experience of the last two years has shewn that it has not been safe for the community to give so much licence to the private venturer who builds or otherwise exercises himself mainly to suit his own pocket rather than for the welfare of the public. But we have yet to learn how to breed and make use of the salaried official, be he architect or any other civil servant: at present his development is at an elementary and incomplete stage. The system in which he is at present embedded is not sufficiently flexible and the individual freedom and responsibility experienced by the architect in private practice is usurped by a hybrid committee or other bunch of individuals, much to the detriment of the official. It is also probable that we shall be driven still further towards specialisation in order that the exacting demands made by modern life may be met; but it must be a specialisation based upon a more humanistic education properly linked up to the whole instead of the present lop-sided method.

This, roughly, seems to be the nature of some of the problems which arise in one's mind from the perusal of this report, problems which it is essential for the coming generation to solve if the values accomplished in the twentieth century are to be greater than the questionable values attained during the nineteenth.

W. E. VERNON CROMPTON [F.]

#### CITY RESIDENTIAL LAND DEVELOPMENT.

The Town-Planning, or, to use the American phrase, the "City-Planning," movement in the States has been accompanied by a great awakening of the civic conscience, and has in many of the towns of America given rise to the formation of city clubs and societies, whose function is to encourage and direct public opinion in matters concerning the beautification and improvement of their cities.

Previous to a Housing Exhibition which was held in March 1913, the City Club of Chicago inaugurated a competition for the procuring of a scheme of development for a quarter-section of land within the limits of the City of Chicago, and invitations were issued to building and landscape architects, engineers and sociologists, for competitive plans for laying out, as a residence district, a typical area in the outskirts of the city. The programme was drawn up by the Illinois Chapter of the American Institute of Architects. The result was a series of plans of an extraordinary interest, a selection of which, with discussions by the various authors and reviews of the competition by some of the most eminent American authorities on the subject of Town-Planning, has now appeared in

book form under the above title. At first glance the problem does not appear to be either very attractive or inspiring; a perfectly square site, 2,640 feet by 2,640 feet (which apparently is the size of what is known as a quarter-section), bounded on the four sides with main traffic thoroughfares, two of which have existing and two of which are to have future street railways, is not one that the average architect would choose on which to display his abilities. But it is in the fulfilling of the strictly defined limitations imposed by the conditions that the chief interest of these plans lie. The energy of the competitors has been concentrated with a singular intensity of purpose on a narrow issue, and the result has been not a diminished but an increased interest, not only in the plans viewed as a whole, but in the solution of the particular problems of the individual plan, and the comparative study of the series is peculiarly instructive. Space forbids any detailed criticism of the many able solutions which this competition has brought forth, but a brief summary of the essential features may be given by a quotation from a review of the plans by Mr. Albert Kelsey, F.A.I.A.: "The elements of the problem are circulation, hygiene and beauty. Circulation, that is the arterial system, with its parkings, sewers, pipes, wires, street-fixtures, etc., is of first importance; hygiene, or the general salubrity of the tract, comes next; beauty, or the pleasurable appearance of the tract, comes last, but not least in that it represents the harmonious blending of those features which rise from the plan with the plan itself. Thus the plan and its developments are one and inseparable, and, moreover, in an intensive problem of this kind where housing is the main consideration, the design is manifestly an architectural problem from start to finish; though the architect, I gladly admit, requires the invaluable collaboration of an engineer and a landscape architect, just as he requires the invaluable collaboration of a mechanical engineer and a heating expert in the designing of an office building."

STANLEY C. RAMSEY [A.].

#### The Message of the Artists.

A number of artists have combined to show in a series of lithographic prints the Aims of Britain and her Allies in the War, and also some typical and impressive aspects of our effort against the enemy. The British Aims are shown in a series of Allegories, printed in colour. "The Freedom of the Seas" is rendered by Mr. Frank Brangwyn, "The Restoration of Belgium" by Mr. Clausen. Other subjects are undertaken by Messrs. Dulac, Greiffenhagen, Augustus John, Ernest Jackson, Gerald Moira, William Nicholson, Charles Ricketts, Will Rothenstein, Charles Shannon, and Edmund J. Sullivan. The British Effort is typified in several series, such as "Making Soldiers," by Eric Kennington, "Making Ships," by Mr. Muirhead Bone, and other series by Messrs. Frank Brangwyn, Clausen, Nevinson, Hartrick, Charles Pears, Will Rothenstein, and Claude Shepperson. The works are now being exhibited in the Galleries of the Fine Art Society, New Bond Street, and are afterwards to go to provincial Galleries.

#### AD STA PAVLVLVM VIATOR.

On Whitsunday died, very suddenly, Thomas Edward Pryce, for thirty-six years an Associate-member of the Royal Institute; and it is desired by his many friends that a few tributary lines may record, in our Chronicles, their esteem and affection for a greatly beloved comrade. Despite the frequent valediction it can be seldom said, with candour, that a man has left this desperate elbow-work of life, regretted by all who knew him. Yet, of Thomas Pryce it is exactly true. His death gratifies no man's malice, brings to none the unlovely solace of a rival's fall, ends no conflict or dispute. To everyone, his thought was kindly and his speech propitious; ill-will and he were not acquainted; envy was, to him, but an idle word. Entirely happy in his lot, he was content with the world as he found it, and coveted nothing but his friends' society.

In older times, such virtues might have inspired a stately epitaph; but we have grown taciturn in the churchyard, and make no discourse of our dead. That form of homage would have been not unfitting, for he was a man of wide reading and well furnished mind, who loved a sonorous phrase. Very like in character must have been the old worthy, of whom it is recorded that he—dust these three hundred years—was "*sine ostentatione probus, sincerus sine cujusdam offensione, sine invidia amabilis, how the portly words recall his presence! inter suos placidus et hilaris, nulli acerbus, there are many mourners at his Club, omnium officiorum diligentissimus, was he not of the House-committee! erga omnes beneficus.*" It might have been composed to his address, so well it fits his memory; yet of how few it would be said without extravagance!

Perhaps 'twere better not. The calm and unambitious tenour of his life calls for no sculptured monument; he will not be forgotten while his friends live, and he would have wished no larger immortality. He sought no high occasions, and achieved no sounding triumphs in his art, preferring a quiet life with modest reward, to the physical strain (for which he was unfitted) and the relentless anxiety of conducting great works. We may not deck his tomb with laurels, the victor's wreath of bays would be unmeaning; but we lay upon his grave a sprig of sweet rosemary,

*"that's for remembrance."*

#### BENE PRECARE VIATOR & IMITARE.

J. W. S.

#### THE LATE GERALD HORSLEY [F.].

The death took place at Crowborough on the 2nd July of Mr. Gerald Horsley, *Fellow and Member of Council*, at the age of fifty-four. The youngest son of the late John Callcott Horsley, R.A., and brother of the distinguished surgeon and nerve specialist, the late Sir Victor Horsley, he was educated at Ken-



sington School, served his articles with Mr. Norman Shaw, R.A., and studied in the Royal Academy Schools. He was the first to hold the Owen-Jones Travelling Studentship, then, in 1887-88, tenable for two years. He began practice in 1888, became an Associate of the Institute in 1890, but resigned two years later among the group of members protesting against the Compulsory Examinations policy then being introduced at the Institute. Rejoining as a Fellow in 1906, together with most of those who had resigned with him, he had since taken a very active part in the affairs of the Institute, serving on the Council and the Art Standing Committee, and for the past three years as Hon. Secretary of the Board of Architectural Education.

The funeral took place at East Grinstead Parish Church on the 6th July, the Institute being represented by Mr. Arthur Keen [F.] and Mr. Francis Hooper [F.]. At the Council Meeting last Monday the Hon. Secretary, Mr. E. Guy Dawber, referred in feeling terms to Mr. Horsley's death and to the esteem and affection in which he was held by his colleagues on the Council, and it was resolved that an expression of their appreciation of his valuable services to the Institute and to the profession, and of their deep sense of sorrow at his loss be recorded on the Minutes, and that a message of their sincerest sympathy and condolence be conveyed to his family.

MR. ARTHUR KEEN [F.], who had been asked to contribute a brief notice of his late friend, writes:—

It is easier for me to express my personal feeling about Horsley than to give any well-considered description and judgment of his work. I knew him since the day when he entered Mr. Norman Shaw's office as a pupil, and the impression formed there of his kindness, his good feeling, and his courtesy has never varied. He had the most genuine good nature and was liked by everybody in consequence. His regard for his master amounted almost to veneration, and it led him, perhaps, into following the actual forms of Norman Shaw's work in preference to breaking new ground for himself, but he invested all that he touched with his own sense of beauty and fitness. He had a good many opportunities of dealing with important buildings, and the published illustrations of his work show how ably he used them. But it was his astonishing draughtsmanship that was the remarkable side of his work. In the first few weeks of his pupilage he would make copies of Shaw's crisp pencil drawings with such fidelity to touch and feeling that the copy could hardly be told from the original, and Reginald Barratt, who was his fellow-pupil, would do the same. But while Horsley's drawings show the methods of his master, they have the most distinctive personal character and touch. And they are quite wonderful! He could draw intricate vaulting or tracery with the utmost precision and firmness, or he could make beautiful studies of sculptured detail in which the most sensitive accuracy was combined with soft, refined texture. Compared with such drawings as those of Rus-

kin, while there is all the precision there is a certain uncompromising hardness of execution as if he grudged the loss of any single fact that was part of the subject, but there is always such breadth and sense of beauty in the work that his drawings, without exception, are charming. His delineation of old work was, in fact, very much like that of Shaw or Nesfield, and the subtle faithfulness of it is quite remarkable. He was the first to win the Owen-Jones Studentship, and he made very good use of the opportunity it gave him for study and travel. He did a good deal of water-colour work, but most of his drawings are in line, either in pencil or ink.

In his personality he was not strong or forcible, but he acted with such tact and reasonableness that he would carry his point where a more insistent man might have failed. Certainly he was very successful as well as popular in his Presidentship of the Architectural Association, and in all that he did at the A.A., as well as at the Institute, he showed himself capable and dependable; in my opinion the recent developments of the Association were to a very great extent due to his influence.

I shall be corrected if I am wrong (I am away from home and cannot verify it), but I believe he was really and truly the founder of the Art Workers' Guild; at any rate, he was an original and active member and Secretary of it, and did very good service in shaping its activities. We shall always remember him with respect and affection, and the loss we have sustained can never be made good. ARTHUR KEEN [F.].

Among Mr. Horsley's principal architectural works are St. Paul's Girls School, Brook Green; St. Chad's Church, Longsdon, Staffs.; All Saints' Church, Hanley, Staffs.; Painted Roof and Wall Decoration, All Saints' Church, Leek, Staffs.; additions to Balcombe Place, Sussex; "Framewood," Stoke Poges; "Coverwood," near Gomshall, Surrey; offices for Universities' Mission to Central Africa, Dartmouth Street, S.W.; part of station buildings for London and North-Western Railway Company at Pinner and Harrow, etc.

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#### THE LATE WILLIAM ARTHUR RIGG [A.].

*"Mort sur le champ d'honneur."*

William Arthur Rigg [A.] was killed in France on April 19th last during heavy shelling of his platoon, from which not a man escaped uninjured.

One of the vast number of the splendid youth of our country to whom the idea of war for its own sake was utterly abhorrent, but in whom the sense of duty and patriotism has been so compellingly strong, he joined the Public Schools Brigade as a private. He received his military training at Edinburgh, but while the papers for his Commission were still awaiting completion he was drafted to France, and saw much active service in the trenches before his untimely death.

His career had been full of promise for the future.

After preliminary artistic studies in Lancaster Municipal School of Art and a short period on its teaching staff, he spent six years as assistant to his father in the practical management of his business as building contractor in Carnforth. He passed from there in 1907 to the office of Mr. G. A. T. Middleton [*A.*], in London, as an articled pupil, and between the years 1907 and 1914 studied successively at the evening classes of the University College School of Architecture (where he was first prizeman in architectural design and Donaldson Silver Medallist), the Royal Academy Schools, and Clapham School of Art, where he took the courses in modelling, drawing from the antique and from life. Maintaining an active connection meanwhile with his native district, he carried out there in private practice a number of interesting domestic buildings, several of which were illustrated in the Studio Year Books. In addition to such manifold activities during these years, he found time for travel and sketching in Belgium, Holland, France, and Italy. Following a period spent in the office of Mr. Robert Griggs in Gray's Inn Square, he joined in 1914 the staff of Messrs. Bradshaw Gass and Hope in Bolton, which he only left to enter the Army.

A training so unusually thorough, at once practical and highly artistic, allied with very considerable natural gifts had fitted him to take a foremost place among the younger generation of architects.

A man of high character and ideals, and with strong individuality, possessing, too, all the typical shrewdness of judgment of the northerner and something more than his share of its dry humour, he was a singularly charming personality and most popular amongst his associates.

He was devoted to his profession, a clever and artistic draughtsman, a hard worker, and a designer of great promise. Withal he had restraint, and the capacity of waiting his time. Such men of sane outlook and fine mental balance can ill be spared in our national life, and he leaves the younger ranks of our profession distinctly the poorer by his loss. Deep sympathy will be extended to his young widow in her sad bereavement.

JOHN B. GASS [*F.*].

#### Professional Classes War Relief.

To the Editor, JOURNAL R.I.B.A.—

SIR,—The excellent work which is being carried on by the Professional Classes War Relief Council is not perhaps as widely known as it should be. Not the least deserving of their many branches in which they give assistance to professional classes is the work carried out by the Maternity Committee. The Maternity Nursing Home, at 13, Prince's Gate, S.W.7, was opened by the Professional Classes War Relief Council early in 1915 for the benefit of the wives of professional men adversely affected by the war. Over 300 babies have been born therein. Application for admission or for assistance in regard to maternity expenses at home should be made to the Secretary.—Yours faithfully,

GEORGE HUBBARD [*F.*].



9 CONDUIT STREET, LONDON, W., 14th July 1917.

### CHRONICLE.

#### The R.I.B.A. Record of Honour: Forty-fifth List.

##### *Fallen in the War.*

PONTON, HAROLD FREDERIC [*Associate*]. Killed in action in France on 29th April.

RIGG, Private WILLIAM ARTHUR, Middlesex Regiment [*Associate*]. Killed in action in France on 19th April.

MCLEAN, 2nd Lieut. JAMES MONTEITH, 2nd Highland Light Infantry [*Student*]. Killed in action whilst leading a bombing party on 28th April.

Second Lieut. J. M. McLean volunteered for service with the H.L.I. in October 1914 and was sent to Gallipoli. He was granted a Commission in the Scottish Rifles in 1916 and left for France in October last. Later he was attached to the 2nd H.L.I. (Terr.) and finally was transferred into the Regular H.L.I. He was 23 years of age, belonged to Paisley, and before joining the Army was in the office of Mr. John Fairweather, architect, Glasgow. He is a brother-in-law of Mr. Hamilton Neil, of Glasgow [*Licentiate*].

##### *Members' Sons fallen.*

SULMAN, 2nd Lieut. GEOFFREY, Royal Flying Corps. Accidentally killed on 20th June. Aged 23. Younger son of Mr. John Sulman [*F.*], of Sydney, N.S.W.

WALKER, Captain L. B., A.P.W.O. Yorks Regiment. Died of wounds received in action 1st July. Only surviving son of Mr. W. S. Walker [*F.*], of Hull. Mr. Walker's elder son, Captain Denis H. Walker, of the same regiment, died of wounds in January 1916.

WAKERLEY, Captain ARTHUR JOHN, Leicestershire Regiment. Killed while leading an attack near Lens on 8th June. Only son of Mr. Arthur Wakerley [*F.*], of Leicester.

Captain Wakerley was a Student of the Institute, but deciding to enter the Wesleyan ministry he proceeded to Peterhouse, Cambridge, where he was when war broke out.

##### *Military Honours.*

FLOWER, Lieut.-Col. V. A., London Regiment (The Queen's) [*Licentiate*], has been twice mentioned in dispatches, and in the last Birthday Honours was awarded the D.S.O.

MOORE, Captain FREDERICK WILLIAM, Royal Engineers [*A.*], has been awarded the Military Cross.

JONES, Lieut. GEORGE HOWARD, Welsh Regiment [A.], awarded the Military Cross in 1915 and recently mentioned in dispatches, has been promoted Captain, Divisional Headquarters Staff.

CLOUTING, Lieut. CHARLES EMMERSON, The Buffs [A.], who received the Military Cross some time ago, has been gazetted Captain and appointed General Staff Officer. Captain Clouting was wounded in the Somme Campaign last September and returned to the Front in February.

#### *Serving with the Forces.*

Information has been received that the following are serving, the total to date being 75 Fellows, 523 Associates, 317 Licentiates, and 295 Students:—

#### FELLOWS.

Richardson, Albert Edward: Probationary Equipment Officer, R.F.C.

#### ASSOCIATES.

Fyfe, J. Simpson: Gunner, R.G.A.

Loveitt, R. A.: R.N.A.S.

Wheeler, Christopher W.: Lieut., A.S.C. Supply Department.

#### LICENTIATES.

Wells-Bladen, L. M.: Captain, R.F.C.

Wenyon, G. H.: Lieut., Cameronians.

#### *Promotions, Appointments, etc.*

Mr. Edgar Wm. Clowes Ovenden [Student], who was in the West Kent Yeomanry, and has served in Egypt, the Dardanelles and Salonica, has been gazetted 2nd Lieut. in the Royal Lancaster Regiment.

Mr. R. G. Roberts [A.] has been promoted to 2nd Lieut., Royal Engineers.

Second Lieut. Wm. W. Houston [A.] has been transferred from the Royal Irish Fusiliers to the Royal Engineers.

Mr. Arthur H. Reid [F.], Hon. Secretary R.I.B.A. for South Africa, who is in the Veterans' Reserve, Cape Town, has had considerable military experience and seen some hard service. Before leaving England in 1877 he had served first in the 2nd Devon Volunteers and afterwards in the London Scottish. At the Cape he joined the Cape Volunteer Artillery and took part in the Gaika Gcaleka, Northern Border, and Zulu Wars. In the South African War he served as Lieutenant in the Cape Peninsula Artillery. When the present war broke out he acted on the Cape Town Recruiting Committee, and afterwards joined the Cape Peninsula Citizens' Training Force.

#### *Charing Cross Bridge.*

The S.E. & C. Railway Company's Bill for altering and strengthening Charing Cross Railway Bridge came before a Committee of the House of Lords on the 3rd July, opposition to the proposal being offered on behalf of the R.I.B.A. and the London Society.

Mr. Tempest, Chief Engineer to the South-Eastern Railway, informed the Committee that the bridge was a source of anxiety, and its strengthening, at a cost of £167,000, should be carried out as soon as practicable. The Company had abandoned the powers obtained in 1900 for widening the bridge, but not those for the enlargement of Charing Cross Station.

Sir Francis Dent, General Manager of the railway, said if a scheme were put before them for a larger improvement the Company would not raise objection to

it on the ground of having spent the £167,000 for which powers were asked.

Mr. Honoratus Lloyd, K.C., on behalf of the opposition to the Bill, asked that the work should be postponed for a period of two years after the declaration of peace. The petitioners against the Bill were anxious that a fair opportunity should be given for the development of a properly considered and larger scheme providing for the removal of Charing Cross Station to the south side of the river and the construction of a fine road bridge with appropriate approaches. The Railway Company's Bill in its present form would unquestionably prejudice the eventual carrying out of the greater scheme.

Evidence against the Railway Company's proposal was given by Sir Aston Webb, the Earl of Plymouth, Lord Ribblesdale, and Mr. John Burns. Mr. Burns said that when the Channel Tunnel was constructed—and he believed that was now inevitable—the traffic of the South-Eastern Railway would probably be doubled or trebled. Charing Cross Bridge and Station in its present position would then be miserably inadequate.

The Chairman, in announcing the decision of the House of Lords Committee, said they would allow the Bill to proceed upon the Railway Company giving an undertaking that no expenditure in relation to Charing Cross Station as apart from the bridge should be incurred without Parliamentary sanction being obtained.

The Committee further decided that, in the event of any public improvement involving the removal of the existing station and bridge being authorised within a period of fifteen years, the railway company should not be reimbursed for any expenditure they might incur on the strengthening of the bridge.

The Committee also required that the company should not commence construction on the works above water until the expiration of three years from the passing of the Bill, unless the Board of Trade, in the public interest, should require the work to proceed earlier.

From the point of view of all those in favour of the larger scheme advocated by the Institute and the London Society the decision of the House of Lords Committee will be welcomed as affording reasonable opportunity for the authorities to take into consideration the possibilities of the greater scheme, and the additional safeguards now introduced by the Committee should prove of great service.

At the first meeting of the new Council of the Royal Institute on the 9th inst. a cordial vote of thanks was passed to Sir Aston Webb, R.A., for his successful labours in connection with the Charing Cross Bridge Bill.

#### OBITUARY.

**William Henman.**—At a recent General Meeting of the Institute reference was made by Mr. E. Guy Dawber, Hon. Secretary, to the death of Mr. Wm. Henman, of Birmingham, and a resolution was passed expressing the

Institute's regret at his decease and condoling with his relatives. Mr. Henman, who resigned his Fellowship in 1913, had had a long and creditable connection with the Institute. He carried off the Institute Silver Medal in 1868 for his drawings of the Church of St. Thomas, Winchelsea; was awarded the Pugin Studentship in 1871; became an Associate in 1882, and a Fellow in 1895. When President of the Birmingham Architectural Association he represented that body on the Institute Council and took an active interest in its affairs. Articled to his father, Charles Henman, in 1866, he was afterwards assistant in the office of Professor Hayter Lewis, and, later, assisted Edmund Sharpe with his works on Architecture. He started practice at Stockton-on-Tees in 1871 and removed to Birmingham in 1879. Among his early works were the Bromwich Town Hall, Handsworth Public Buildings and Free Library, Stockton Exchange Hall and Club, Aston Public Buildings and Free Library, The Sir William Giltstrap Library, Newark-on-Trent; Public Offices and Church Schools, Middlesbrough; Schools for the following Boards: Ormesby, Norton, Leeds, Aberdare, Llanelly, Wednesbury, Aston, etc. His name was widely known in connection with hospital planning and construction, of which he had made a special study. He was the architect of the New General Hospital, Birmingham; the Royal Victoria Hospital, Belfast; the Guest Hospital, Dudley; remodelling and improvements, Stockton and Thornaby Hospital (jointly with Mr. E. A. Whiphram); Hospital, Lansdowne Crescent, Great Malvern; Darlington Hospital extensions (with Mr. G. Gordon Hoskins). He was the architect, with his brother, Mr. Charles Henman, for the Metropolitan Asylums Board, of the Homes for Convalescent Children, East Cliff, Margate; High Wood School, Brentwood, for ophthalmic cases; Defective Children's Home, Elm Grove, Peckham, and Isolation Block, St. Anne's Home. They won the second premium, Hendon Asylum, for the Central London Sick Asylum District Managers, and the third premium, Park Hospital, Hither Green; second premium, Bristol Royal Infirmary extension. Besides his hospital work he had a good general practice. In Birmingham he was the architect of the Nurses' Home; the Central Exchange, on the Christ Church site; Scottish Union and National Insurance Company's Offices, Colmore Road; Midland Hotel, New Street. Other of his buildings are the Newark-on-Trent Public Library; Midland Counties Home for Incurables, Leamington, Victoria Wing (with Mr. Hawley Lloyd); West Bromwich Union Offices (with Mr. Timmins); electric light and power generating station, Handsworth; St. Andrew's Brine Baths, Droitwich, etc. His contributions to the Institute Transactions include the following Papers: "Hospitals" (JOURNAL, 26th April, 1894); "The Construction of Hospitals" (JOURNAL, 6th May, 1897); "Building By-laws and their Administration" (JOURNAL, 24th December, 1898); "Royal Victoria Hospital, Belfast: Its Institution, Design and Equipment" (JOURNAL, 19th December, 1903).

Lieut. James Bennett, R.E., of Saline, Fife, who was killed in action on the 28th November last, had only been elected Associate as recently as December, 1915. He had had a distinguished career as a student. While attending the Glasgow School of Art he was awarded in the Session 1909-10 a bronze medal for general work, in the following year a gold medal for excellence in general work, and also a medal for excellence in architectural design. He won the Alexander Thomson Travelling Studentship, value £50, and this, supplemented by a £25 Bursary from the

Glasgow School of Art, enabled him to travel in Italy and France for six months. On his return he won the R.I.B.A. Silver Medal and £10 10s. for measured drawings of St. Pietro Montorio, Rome. He was for some years in the office of his uncle, ex-Bailie Houston, of Dunfermline, and was afterwards for three years on the staff of Sir John Burnet at his Glasgow office. His commanding officer writes that his loss is keenly felt in the officers' mess. He was a keen worker and quite fearless of danger.

## MINUTES.

At the General Meeting (Ordinary), held Monday, 25th June, 1917, at 5.30.—Present: Mr. Ernest Newton, A.R.A., in the Chair; 39 Fellows (including 16 members of the Council), 24 Associates (including 2 members of the Council), 8 Licentiates, 7 Honorary Associates, and numerous visitors—the Minutes of the meeting held 11th June, 1917, were taken as read and signed as correct.

The Hon. Secretary having announced that the following members had fallen in the War:—Lieut. Roland Walter Lines, Canadian Expeditionary Force, Fellow elected 1914, and William Arthur Rigg, Public Schools Brigade, Associate elected 1909—it was resolved that an expression of the Institute's deepest regret at their loss be entered on the Minutes, and that a message of sympathy and condolence be sent to their relatives.

The President announced that M. Henri Paul Nénot, who was to have been present to receive the Royal Gold Medal, was prevented by illness from attending, and that the French Ambassador in London had deputed M. Adrien Thierry, Secretary of the Embassy, to receive the Medal on M. Nénot's behalf.

The President delivered an Address dealing with the career of M. Nénot, and handed the Medal to M. Thierry for transmission to M. Nénot.

M. Thierry having read to the meeting a letter from M. Nénot, and briefly addressed the meeting on his own behalf, a vote of thanks was passed by acclamation to the French Ambassador for deputing M. Thierry to be present.

Mr. Reginald Blomfield, *Past President*, having referred to the President's approaching retirement and expressed appreciation of the able manner in which he had conducted the Institute's affairs during his Presidency, formally unveiled and presented to the Institute Mr. Newton's portrait, the work of Mr. Arthur Hacker, R.A.

Mr. Paul Waterhouse [F.] also spoke in terms of appreciation of Mr. Newton's services, and the President having responded, the proceedings terminated at 6.30.

*Eretnum.*—Art Committee Attendances (May issue, p. 174): Mr W. A. Webb should have been credited with 3 attendances instead of 0.

## Contents of this Issue.

	PAGE
Presentation of the Royal Gold Medal: The President's Address, . . . . .	201
Presentation of Mr. Newton's Portrait [Reginald Blomfield, R.A., and Paul Waterhouse] . . . . .	204
New Materials and Methods as influencing Design [H. D. Searles-Wood, H. Kempton Dyson, and others] . . . . .	206
Reviews.—An Artist's Impressions of the Front [Reginald Blomfield, R.A.]—Reconstruction [Herbert Wigglesworth]—Vocational Organisation [W. E. Vernon Crompton]—City Residential Land Development [Stanley C. Ranserv] . . . . .	216
The late Thomas Edward Pryce [J.W.S.] . . . . .	220
The late Gerald Horsley [Arthur Keen] . . . . .	220
The late William Arthur Rigg [John B. Gass] . . . . .	221
Professional Classes War Relief [George Hubbard] . . . . .	222
R.I.B.A. Record of Honour . . . . .	222
Charing Cross Bridge . . . . .	223
Obituary.—William Henman; James Bennett . . . . .	224
Minutes . . . . .	224

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